AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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May.

At length the finished garden to the view
Its vistas opens, and its alleys green.
Snatched through the verdant maze the hurried eye
Distracted wanders; now the bowery walk
Of covert close, where scarce a speck of day
Falls on the lengthened gloom, protracted sweeps,
Now meets the bending sky, the river now
Dimpling along, the breezy ruffled lake,
The forest darkening round, the glittering spire,
The ethereal mountain, and the distant main.—THOMSON.

The genius of gardening was very late in descending upon our shores, and, even now, has made no very decided impression upon American landscapes. Horticultural societies are of modern origin, and it is only within a score of years that the public has taken any marked interest in gardening as an art. It is far from being popularized now, though every year witnesses an increased interest in the cultivation and adornment of the grounds around dwellings, and finer horticultural products at our Summer and Fall exhibitions. In many parts of the land, one may travel for days if he will keep clear of the steamers and railways, without seeing any evidence that horticultural societies are known, or that papers which treat of gardening are published. There is no artificial arrangement of the grounds about the dwellings, no planting of trees by the wayside, no fruit yard, and nothing beyond a few square rods devoted to cabbages, peas, beans, and cucumbers, that has the name of a garden.

In the cities and villages, and their suburbs, and along the lines of our great thoroughfares, the evidences of horticultural taste are numerous. We see not only beautiful dwellings, villas and cottages, but appropriate ornamental grounds around them, like precious stones in their settings of gold. One has only to pass up the Hudson, or the East river at this season of the year, to see that the Genius of gardening has been domiciled among us. The cities of New-York, Philadelphia, and Boston, to say nothing of smaller places, are surrounded with a net-work of country residences where the landscape gardener has applied his skill. There are, no doubt, many examples of bad taste, both in the architects, and in the gardeners, but taken as a whole, these suburbs are a credit to the horticulture of the country. For twenty miles around Boston, in all directions upon the land, you will find little else, than thrifty homes, however small, still surrounded with fruit and ornamental trees, adorned with flower borders and shrubbery, luxuriating in strawberries, and in the clusters of the vine. Owing to the superior attractions of the scenery around our bay, and our facilities for water communication, our cultivated homesteads are more widely scattered. Downing has left his footprints all along our noble river, on both its banks, and his memory will be kept fresh and green, while the grounds he laid out and the trees he planted are preserved.

But the mass of our people have neglected the garden and have no taste for its delightful employments. The farmers, as a class, are often found to be behind the shop-keeper, and the mechanic, in horticultural skill. The unrest of our rural population, kept alive by the spirit of emigration, has been exceedingly unfavorable to gardening. The garden implies a fixed abode, and is one of the strongest influences to foster the love of home, and to hallow one spot of earth

Our hearts go out spontaneously to the garden, as these gladsome days return. The esthetic nature of man craves communion with flowers.

"Along these blushing borders bright with dew,
And in your mingled-wilderness of flowers,
Fair handed Spring unbosoms every grace,
Throws out the snow drop, and the crocus first,
The daisy primrose, violet darkly blue,
And polyanthus of unnumbered dyes,
And full ranunculus of glowing red.
Then comes the tulip race, where Beauty plays
Her idle freaks; from family diffused
To family, as flies the father dust,
The varied colors run; and while they break
On the charmed eye, the exulting florist marks,
With secret pride the wonders of his hand.
Infinite numbers, delicacies, smells,
With hues on hues, expression can not paint
The breath of Nature, and her endless bloom."

We doubt if any means of educating and refining the taste of children is more potent than the flower garden. There is cultivation of mind and heart in the care of these beautiful plants. We know that many despise the flower border because there is no pecuniary profit in it. They can understand the language of clover heads, and red top, of the spikes of maize and the potato vines, for these products of the soil will sell in the market. "But what is the use," say they, "of your pinks and roses, jonquils and tulips. They look well enough, but wont fetch a red cent."

And it is because they look well enough, that we would have flowers around every farmer's home. Pray, what has the Creator given us eyes for, and a sense of the beautiful, if they are not to be gratified? Roses are certainly more beautiful than red cents, and, if they have the opportunity, the hearts of our children will go out after them more spontaneously. No wise father will grudge the labor and expense necessary to form these cheap bonds of virtue around his home. The seeds of the annual flowers are purchasod for a trifle, and the bulbs, and roots, and shrubs, in this age of nurseries, are within the reach of most thriving farmers. Make a beginning this Spring, and let your son, when he goes forth to seek his fortune in the world, have occasion to remember "his mother's rose bush." While that is striking its roots, his heart will go down into the soil of his birth place, with a depth and fervor of attachment that new scenes will never eradicate. While flowers bloom, the picture of his early home will grow brighter in memory.

But if we submit the garden to the test of utility, we have the strongest inducements to cultivate it. It is a school of industry for both boys and girls, forming habits of systematic labor, and making work attractive by the pleasures that accompany it. Almost any child will dig in the soil for the sake of beautiful flowers, and fine fruits. These habits formed in our early years, abide with us. They lay the foundations of character, and are worth more than gold. The boy that learns to love work under ten years of age, has a fortune in that habit, useful for all after life.

The garden is not to be despised, as a means of family support and comfort, and of profit as well.

"And see, my friends, this garden's little bound,
So small the wants of nature, well supplies
Our board with plenty; roots or wholesome pulse,
Or herbs, or flavored fruits; and from the stream
The hand of moderation fills a cup,
To thirst delicious. Hence, nor fevers rise,
Nor surfeits, nor the boiling blood, inflamed
With turbid violence, the veins distends."

A family of the average size may have half its table expenses met by a well cultivated garden. Here is asparagus, pie plant, lettuce and other salads already in profusion. A little further on in the season, the ground grows red with strawberries, and all the smaller fruits hang temptingly from the boughs. Here are peas, beans, and green corn, beets, onions, and tomatoes, okra, egg plant and celery, squashes, melons, and the larger fruits of Autumn. It were a long catalogue that embraced all the delicious vegetables and fruits that a well appointed garden produces. There is health as well as economy in the cultivation of these articles. There can be no doubt that, as a nation, we live far too largely upon meat. Were fruits and vegetables as common as they ought to be upon the farm, this evil would

be remedied. Children and almost all adults of unperverted tastes prefer a large proportion of this diet; and it is owing mainly to the fact that gardens are neglected, that salt junk and johnny-cakes, hog and hominy, reign supreme upon so many tables, for the larger part of the year. Consecrate a few square rods to the spade and the garden rake, and let Flora and Pomona henceforth be numbered among your household gods.

Calendar of Operations for May, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

EXPLANATIONS.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

The fields, which so long wore a cheerless russet hue have now fully assumed their lively green vesture, or where the newly turned furrows follow the plow of the busy cultivator, the clean rich soil gladdens the heart with its freshness. Many in favored locations have already completed sowing Spring grain, and are hastening to prepare the corn fields for planting. Those who have deferred putting in oats or other grain because the seed bed could not yet be made mellow and warm, have done wisely. A young plant firmly rooted by favorable conditions at the first, has good promise of subsequent thrift, while a stinted growth in wet and lumpy soil is with difficulty improved by any subsequent care. Happy the men who have learned the value of draining and subsoiling, and need not to wait for the water to slowly find its way from the surface through the compact soil.

Stock should not be neglected during the press of business this month. The first few weeks after bringing forth their young is a trying season with them, and they should have corresponding care. In all cases it is easier to prevent their degenerating than to recruit them when low in flesh.

Bees are winging their way over the neighborhood, exploring every corner for their stores. Ample directions for their management are given under the head "Apiary" on another page.

Beans are worthy of attention as a field crop. They derive a large portion of their nourishment from the air, and will produce well where corn would fail. Plant, f, m, or as soon as all danger from frosts is past—they are too tender to bear severe weather. Cultivate bush varieties in rows two and a half feet apart. Limas and others usually grown on poles may also be put in drills and supported on wire trellises. Some claim that they yield better when trained horizontally, on leaders not more than five or six feet high. In planting, cover lightly, say one half to three fourths of an inch.

Broom Corn—Plant, f, to m, in hills three feet apart each way, or if in drills make the rows four feet distant, and when fairly up, thin to eight inches in the row. The dwarf variety described in last No., page 104, may be drilled closer, say in rows three feet apart.

Buildings—If any are to be painted this season, it is better done now than during the Summer, when the hot sun dries it too rapidly. Fall painting is preferable where it can be done. In erecting new outbuildings, provide for the introduction of water under cover for stock, and ample accommodations for stabling, and for the manufacture and preservation of manure.

Cabbages are a profitable crop when grown near enough to large towns to be marketed readily. Plant out, ff, m, from hot-beds in heavily manured mellow ground, for earlier crop, if not done in April. Examine roots of growing plants for cut worm. For late crop, sow, ll, in drills for future transplantings.

Calves kept for stock, will pay well for liberal feeding. Give plenty of milk with oatmeal or shorts. Let any change of diet be made gradually, to avoid diarrhea. Castration is most safely performed when the animal is about a month old.

Carrots—Try a small plot, if not already put in as directed last month. Horses and cattle will all take them gratefully when given with dry feed next Winter. With proper cultivation a very large yield of food per acre can be thus secured.

Cattle are mostly turned to the pastures. Allow them fodder still, if the grass is insufficient. Continue to give wet bran and shorts to milch cows until green food is abundant. It is better to keep working cattle stabled and feed them plenty of grain and roots with hay, rather than turn them out during the heavy labors of the season.

Cellars—Keep well ventilated and free from all decaying matter. A flooring of hydraulic cement excludes dampness from the ground, gives a level surface, is less infested by rats, and affords a cool place of deposit for butter, meat, etc., in Summer.

Clover may still be sown on Winter grain, ff. Where wanted for plowing in green to enrich the soil, f, to m, will be seasonable. For this purpose seed liberally, say eight to ten quarts per acre. See last month.

Corn gains nothing by haste in planting. Many cultivators turn over the sod early, and leave it until the grass roots have started; then, when the ground is warm and the weather settled, the field is well harrowed, which checks the growth of grass and weeds and renders the after cultivation easier. Marking out the rows should be done with a very light plow, or better, with a marker made of a strip of scantling with pins set at the right distance for the rows, and two handles like a plow to guide it. The whiffletree can be attached by two trace chains passing to staples near the ends of the scantling. Deep furrows to receive the seed remain wet a long time if much rain falls, injuring the young grain or even preventing germination. The use of the marker obviates this difficulty; where stable manure is used in the hill, a light furrow is needed. Use no Peruvian Guano in the hill unless mixed with a large quantity of earth, plaster, or muck.

Draining—Read suggestions in Calendar of last month. It is always in order when there are heavy compact soils requiring amelioration.

Economy on the farm does not consist merely in spending little and living close, but in turning every thing to the best account. The early morning hours are most valuable for labor—turn out from the bed in the house to the beds in the garden, and wake up the plants there. Remember that the master's eye can do more work than both his hands, and leave no part of farm operations to be done without your oversight. Hire good hands, give good wages and require good work.

Fences not now in order, are teaching cattle to be unruly. Five rails high in Spring are better than six after stock have learned to jump or throw down fences. Frequently take a survey of every part of the enclosures, that all may be kept safe. A little care in this particular may prevent the loss of a cow by breaking into a green clover field, or the rooting up of the garden by a drove of hogs.

Flax and Hemp should be sown, ff, m.

Grain Fields—Allow no stock to enter upon those sown last month, or the Winter grain. Now is a favorable time to pull out dock, cockle, Canada thistles and other foul weeds that will injure the growth and depreciate the value of the grain. Choose a day immediately after a rain when they can be drawn out easily. Unless the ground is in good heart, sow on guano, lime, or wood ashes.

Grass Seed—Sow, ff, upon grain fields not already seeded. It is safer done in April. Many prefer from the middle of August to the last of September for seeding to grass, and find it pays to put on the seed alone, instead of with grain as is so generally done. To ensure a good catch, make the land rich.

Hedge rows, if neglected, are sending up their new shoots to encroach still more upon the fields. If they can not be rooted out now, cut the tops and turn in sheep to eat off the young growth —Get rid of them in some way both in the fields and by the roadsides.—The grain lots are often well seeded with thistles and other noxious weeds from a neglected patch in the road, which it was nobody's business to extirpate.

Hired help will be more profitable if well treated, and made to feel an interest in their labor. Provide good fare, allow ample rests, be kind and cheerful with them, but firm in requiring faithful performance; a word of praise now and then will accomplish much more than any amount of *jawing*.

Hoeing will be necessary before the close of the month. Where the land is smooth enough to allow it, try cultivating with the horse hoe. Keep the ground well stirred between the corn rows, and allow weeds or grass no foothold. Prevention is easier than cure.

Horses are still paying for good care, by their daily labor. Follow directions of last month.

Hungarian Millet—Sow, ff, m, to raise seed; m, to l, for soiling. For hay, to be cut when in blossom, it may be sown as late as June. Use from 16 to 20 quarts of seed per acre, on well manured land, prepared as for grass seed, and cover with the bush harrow.

Lucern—Sow, ff, m. It requires deep soil with open subsoil, into which the roots penetrate very deeply. Being perennial it is valuable for feed, where it will succeed, as it can be cut two or three times in a season. Use 10 to 12 quarts of seed per acre.

Manures properly prepared, are plant-food. The greater the quantity manufactured and properly used, the more abundant the return from the land. Every decaying animal and vegetable substance on the farm furnishes a supply. Weeds from the garden and the roadside, leaves from the forest, muck from swamps and sods from plowed ground mixed with droppings of animals, or saturated with yard washings, will, if spread on the fields, be worked up into corn, oats, potatoes, etc. Enriching the land enriches the cultivator. Save, make, and use all that can be made available.

Meadows—Keep out all stock. Top dress with fine compost, plaster, wood ashes or Peruvian guano. Open sluiceways from the roadside, and allow the wash to spread and fertilize as much surface as possible.

Onions may still be put in, ff, according to directions of last month.

Peas for feeding out may be sown, ff, with oats to give partial support to the vines. For table use we have raised green peas satisfactorily in potato hills, the potato vines answering for bushes.

Plowing—Much labor in after culture will be saved by thorough plowing of corn ground. See that the sods are well laid over, otherwise the grass will give much trouble. Keep the plow out of wet lands until dry enough to turn up without leaving hard lumps, which will be almost as useless as stones throughout the season. Continue to deepen the soil by more thorough tillage. Subsoiling may often be cheaply done by following in each furrow with a light one horse plow.

Potatoes—Plant, ff, if delayed until now. Peach Blows, Carters, Prince Alberts, Mercers, Dykman and Davis Seedlings, are favorites in this vicinity, but so many new seedlings have been cultivated the past few years, almost every neighborhood has its own selection that are in good repute. The rot will probably affect all varieties under some circumstances, for thus far it is not proved to depend upon the kind planted.

Poultry may be kept from disturbing gardens by confining them until late in the day, and allowing them an hour or two before sundown to go at large. If well fed in the poultry yard, they will then be busy hunting for insects until night and not do much harm by scratching. Chickens in coops should be kept on clean ground, and not allowed to run in the morning until the grass is dry. Feed with cracked corn and milk curds. Set eggs, ff, m, for late chickens.

Provisions—Pork in barrels in the cellar, hams in the smoke-house, and other provisions, need looking after occasionally. See that the brine is of sufficient strength, and covers the meat in barrels—rusty pork is a poor article of diet Hams sowed in thin muslin bags, and whitewashed, will not be troubled by the fly. Keep them dry and cool. A good method to keep hams through the Summer, as we have proved, is to pack in barrels or bags with plenty of sweet cut hay around them.

Pumpkins should not be planted in the garden with squashes. Put them in with corn or potatoes, scattering them well over the field. In favorable seasons they will afford a good supply of very nutritious food for fattening stock in the Fall. Plant a patch of the cheese or other good variety for table use.

Root Crops deserve more attention than they are yet receiving in this country. Mangold Wurtzel and Sugar Beets, Carrots and Turnips are relished by stock when fed with hay, and promote their thrift by keeping up their appetite, as well as by the nutriment they contain. Sow carrots, parsneps and beets if not already done. Turnips do better in June. Try at least a small plot.

Sheep—Care for as directed last month. Cut off all tag-locks and trim the hoofs of any needing it. Castrate lambs when from two to three weeks old. Wash sheep, m, if the water be sufficiently warm, and shear, ll, or early in June. If sheep are kept principally for their wool, it is a good practice to mark the weight of each fleece plainly upon the ewe, and keep those yielding the most for breeders.

Sorghum—Plant, f, m, on ground prepared as for corn, and cultivate in the same manner. For soiling it may be sown broadcast, or better, thickly in drills. Last season's experience proved that in many localities in the middle States, it will be a paying crop at twenty five cents per gallon for the syrup.

Swine—Sows with their litters, need plenty of nourishing food. Allow none to run in the road. A hog pasture containing fresh water, should have a place on every farm.

Tobacco—Keep the young plants free from weeds, and transplant, m, l, to deeply tilled and heavily manured soil. Set the plants in rows three, to three and a half feet apart, and two and a half, to three feet distant in the row.

Tools, Machines, etc.—Examine mowers and reapers, horse pitch forks, horse hoes and other labor saving implements, particularly those that have been tested. Always buy, rather than borrow, if possible. See that every implement is kept in repair—harness well oiled, wagons, carts, etc., greased and otherwise ready for use. Have a tool house and work shop for storing and repairing farming apparatus.

Orchard and Nursery.

There is little danger that the market will be overstocked with good fruit by the present generation at least. There are thousands who have never yet tasted what the experienced would consider a first rate pear, peach, or grape. Even of the ordinary kinds there is very rarely an adequate supply to reduce the price to a point that would enable persons of moderate means to indulge freely. The success of pains-taking cultivators leaves no doubt as to the profitableness of fruit raising. But even though it is not made a leading branch of farm industry, there can be no good excuse for neglecting to stock the homestead with choice apples, pears, peaches, etc. *Take time* for it—it cannot be better bestowed than in providing these promotives of health; these luxuries that as much as any other feature make rural life desirable. It were much better that tree planting, except for evergreens, should have been completed last month, but make a trial of at least a few trees, now at the earliest moment, rather than not at all.

In the Nursery, the hurry of business is not yet over, much of the planting necessarily being delayed while taking up, packing, and sending away early orders. Many of the stocks, having been kept in the cellar, are still in good planting condition. Besides, this is the evergreen planting month, and so largely are these ornamental trees now grown to supply the constantly increasing demand, the nurserymen are still pressed with business. As soon as the planting and transplanting is over, grounds should be spaded, where it can not be plowed, and the plow or horse-hoe run through the nursery rows, adding manure where needed.

Apple trees suffer less than some other kinds from late transplanting. It were better to have finished with them in April, but by taking up, ff, with plenty of soil with the roots and resetting immediately, they will live.

Budded Trees—If not done last month, cut away the growth above the buds inserted last season, unless they have failed to take. Leave a few inches of the main stem above the cut, to which the new growth may be tied for support, ll. Remove all suckers.

Evergreens will be putting forth their new growth this month, and being in full vigor, are better able to bear transplanting than at any other season. Make a good selection of firs, spruces, pines, etc., for ornament and shelter, with arbor vitæ for screens, and transplant, m, l. Keep the roots as much as possible from exposure to sun and wind; they suffer more than deciduous trees, owing probably to the resinous quality of the sap which hardens easily, and stops the circulation. Choose a wet day, take up plenty of earth with them, and give sufficient room for the lateral roots in the new location.

Grafting may still be done, ff, if the cions were previously cut, and are in good order; full directions were given last month. Rub off suckers, ll, so as to give the grafts all the sap.

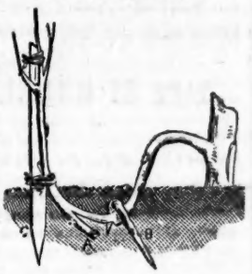
Head back the leading shoots of pear and apple trees, especially those inclined to a strong, upright growth. Peach trees are improved by cutting back one-third of the last season's growth, not only upon the top, but among the outer branches. Dwarf pears are also greatly benefited by a free heading back. Cut near a bud upon the side where the leading shoot is desired, Open spaces can thus be filled with branches.

Hoe out nursery rows carefully, m, l. Much of the thrift of the trees depends upon keeping the surface light and porous.

Inarching, or grafting by approach, may be performed, m, l, on deciduous, and, ll, on evergreen trees. This is a ready method of constructing an ornamental gateway, bringing together, overhead, the branches of trees set for the purpose the previous year. Select limbs as near of a size as possible, of smooth growth; pare them alike, and bring them together so that the inner bark shall exactly meet on one, if not on both edges of the pared portions. Bind strips of bass matting or muslin, coated with grafting wax, firmly around them, and wind a string over the whole. If exposed to be swayed about by the wind, secure them to stakes, or the main branches of the tree. Leave the growth above the union until next season.

Insects require constant watchfulness. Catterpillar nests will soon show themselves if the eggs were not destroyed; brush them down at once, and crush them under foot. Wash the trunks of all trees covered with scale or moss with a mixture of 1lb whale-oil soap to 6 gallons of water, or common soap and water. Potash and water will answer the same purpose. Examine peach and apple trees for borers, if any saw-dust is found around the collar of the tree, probe the hole with a wire or slip of whale-bone, or if he cannot be reached in this way, follow the insect with a knife or gouge, and gently kill him.

Layer, ff, m, the shoots of quince trees and ornamental shrubs. This is also an easy way of obtaining an additional stock of grape vines for home use. Choose well-ripened wood of last year's growth, bend down and bury a portion, fastening it in its place with a forked stick, and support the part carried up from the ground with an upright stake. A cut is sometimes made partly through the layered portion to facilitate the growth of new roots. The soil should be made mellow for the new roots to strike in. The figure shows the whole process.



Mulching newly planted trees with straw or tan bark, is beneficial, particularly in dry weather. Spread it about half an inch thick over the surface as far as the roots extend.

Orchards should be cultivated, not to raise rye, oats, or corn, but to secure a more profitable crop, a full bearing of fruit. Spread a liberal coat of composted manure and plow it in, not deeply enough to disturb the roots near the surface, then harrow it occasionally through the season to keep down the weeds. Avoid wounding the trees with the plow—work about them with the hoe. Allow no suckers to grow about the body of the tree.

Peaches, apricots, and other stone fruits not transplanted last month, may still be set out, ff, with the precautions mentioned above, under apple trees.

Pears may also be removed, ff, if neglected until now. Form them to a compact head by cutting back a portion of last season's growth; this will also induce the tree to throw out fruit spurs. It is injurious to these or other trees to allow fruit to mature the first season after resetting; all the vigor is needed to recover from the effects of disturbing and wounding the roots, change of soil, etc.

Plow lightly and frequently between the nursery rows. Do not leave a furrow lying for a long time against the bottom of the trunks.

Plums—Set out, ff, if not already done. Cut out and burn all black knot excrescences. Dust the tree several times with air slaked lime, just as they are passing out of bloom, to drive away the curculio. It may be easily applied from a small bag of thin muslin tied to a pole, and shaken about among the limbs. This method has proved successful in some cases. Occasional showerings with solution of whale-oil soap are also recommended. Repeat the process twice a week until the plums are half grown. Let poultry have free access to the plum yard—they will turn the insects to profit.

Pruning—Except removing small branches with a knife, wait now until mid-summer. If any large branches must be removed, coat with wax, etc., as directed last month.

Seed Beds—Keep free from weeds, and shade evergreen and other tender sorts from the hot sun. The natural place for germination of tree seeds is under shelter, among the fallen leaves of the parent tree. Water occasionally during dry weather.

Stocks of apple, pear, cherry, etc., should all be out, if not done, set them ff.

Stools, that is, trees and shrubs kept to propagate from by layers, should now be spaded about, and the outer branches laid down, removing those which were layered last season, and are now rooted. With many shrubs this is the best method of increasing the stock. Quinces are now largely propagated in this manner. The upright growth should be frequently cut back to induce suckers.

Weeds—Treat them as intruders at all seasons.

Kitchen and Fruit Garden.

Want of time is the excuse usually made for neglect of this department. This would be valid if time could be more profitably spent, but an exact account of the produce of a well kept garden if devoted only to the cultivation of common vegetables, would prove it to be the best paying plot of the whole farm. Lying as it does usually near the house, it affords a convenient place to turn to account spare portions of time—the hour before breakfast, an occasional spell between showers on a changeable day when other labors are interrupted, etc., but its care should not be left for these alone. Its cultivation ought to be calculated for as much as hoeing corn, haying, or harvesting. A well kept garden upon a homestead, like a neat show case on a merchant's counter, is a sign of a good assortment in the general stock, and contains itself the most attractive articles. The light reflected from the vegetables and fruits of a thrifty well assorted garden, gives cheerfulness in the kitchen, and satisfaction around the family board—*that* is an item worth reckoning.

Gardeners in this latitude have generally, without doubt, improved the early opening of Spring, and beds are completed, and much of the seed sown according to suggestions of last month. Many things written then apply equally now, where the plants are not already growing.

In arranging the plan, it is economical to lay out the grounds so that two or three successive crops can be taken from the same plot, as; turnips to follow early peas, the potatoes first dug to be succeeded by late cabbages; radishes and lettuce to be scattered among hills of melons and other vines, etc.

Asparagus now rapidly sending up its succulent shoots, should be kept cut to prolong the yield. Cut carefully so as not to injure the shoots coming up.

Beans—Plant pole and bush varieties, m, l, cover lightly with the eyes set downward. We prefer a trellis of wires or cords extending along stakes, to poles. Where poles are used, set them before planting.

Beets—Sow, ff, m, in drills half an inch deep, eighteen inches apart. For Winter use sow, ll. Give them room to extend downward into rich, mellow soil.

Blackberries—If not transplanted last month, set them, ff, m. Stake up old canes or train them as described last month. Seeds of the blackberry should be sown, ff—last month was still better. Put them in mellow soil in drills eighteen inches apart, covering with half an inch of finely pulverized earth. Soaking the seed for a few hours before planting will facilitate vegetation. Keep the young plants free from weeds. They will be ready for transplanting next Spring, and for fruiting the succeeding year.

Borecole and Broccoli—Sow, ff, m, in rich soil and cover very lightly. Water if dry. Transplant from the hot-bed, f.

Cabbage and Cauliflower—Sow, f, m, for late use in rich mellow ground. Plant out, ff, m, from hot-beds and cold frames if any remain. Scatter soot or dry ashes and lime over the seed rows to protect plants from the garden flea. Keep former plantings well hoed, and examine frequently for the cut worm.

Carrots and Parsneps will go down deeply if encouraged to do so by well trenched ground properly enriched. Sow, ff, if not already in as directed last month.

Capsicums (Peppers)—Plant out from hot-bed, f, m. Set them in rows two feet apart, eighteen inches distant in the row.

Celery—Sow, ff, m, for late use. Set early plants, m, l, in trenches a foot to eighteen inches deep; water and shade them until fairly started. June will be early enough to transplant the main crop.

Cold Frames—Remove any remaining plants to open grounds, ff, m, and store the frames for another year.

Corn—Plant small plots of sweet varieties, f, m, l, at intervals of a week or ten days, to ripen in succession.

Cucumbers—Transplant those started in hot-beds as directed last month, f, m. Plant seeds, ff, m, for Summer use and l, for later crop and pickling. Place over the young plants light frames covered with millinet, to protect from insects; or if these are not used, visit early in the morning, and destroy them with the thumb and finger Sprinkling the plants with water saturated with hen droppings, assists in keeping off insects, and in hastening the growth. Put in abundance of seed at intervals, to feed the insects that escape. They can be thinned out when danger is past.

Currants—Finish planting, ff. Remove all dead and decaying branches. Wash water and house slops thrown around the bushes will benefit them, and remove a nuisance too often seen near the back door.

Egg Plants—Set out from the hot-bed as soon as the weather is warm and settled, usually about m. They will not bear cold.

Fruit Trees—Train wall and espaliers to proper form, cutting back as needed. Rub off shoots appearing out of place.

Grapes—Secure them to stakes, trellises, or arbors. Lead wire is excellent for this purpose; it yields easily so that the vine is not cut, and may be readily twisted in fastening. Vines may still be set, ff.

Herbs—Set any remaining roots, ff.

Hoe frequently about early vegetables to destroy weeds and keep the surface porous. Young plants just pushing through the surface are often injured by a hard crust

formed during drouth, break it up carefully, not injuring the tender shoots.

Hot-Beds—Complete transplanting from them, f, m, and put away sashes and frames for use another season.

Insects—Guard against them by dusting with soot, snuff, pepper, etc., and hasten the growth of vegetables out of their reach by sprinkling with liquid manure; the odor of this will repel some kinds.

Kohl Rabi—Sow, ff, m, and treat the same as cabbage, setting the plants closer, say in rows two feet apart, and one foot distant in the row.

Lettuce—Sow, ff, and every two weeks for a succession. Thin cabbage varieties to nine inches apart, to allow plenty of room to form good heads. The plants removed will supply the table. Transplant from hot-bed, ff.

Manures in liquid form are convenient of application to vegetables, and aid in rapid growth. See page 139.

Melons—Plant, m, l, protecting and cultivating as directed for cucumbers. See article on page 149.

Mushroom Beds for Summer use may be made, f, m.

Nasturtiums—Sow, ff, m, for flowers and for pickles.

Okra—Sow. ff. Plant out former sowings, m.

Onions may still be sown, ff, for late use. The pamphlet on onion culture published at this office, gives complete directions by practical men. Set top and potato onions, ff, if not put in last month.

Peas—Sow, f, m, l, for a succession. See article on page 117, April No. Bush early sorts, m, l.

Potatoes—Plant, ff, if not completed.

Radishes—Sow, f, m, l, at intervals of a few days. Scatter the seed between rows of beets, and around hills of vines, to save space.

Raspberries—Tie up canes to stakes or low trellises, ff. Cut back long straggling shoots. Keep the ground well enriched by forking in well decomposed manure.

Rhubarb—Set roots or sow seed, ff, if not supplied. Hoe out all grass and weeds, and keep the surface loose. Manure heavily around them.

Sage, Savory, etc.—Sow, ff, m. Transplant last year's sowing.

Salsafy—Sow, ff, m, on soil deeply worked, the same as for carrots.

Seeds—Try new varieties before purchasing largely. Set out all remaining roots or plants intended to furnish a supply for next year.

Squashes—Plant, f, m. See directions last month. Protect from insects with frames covered with millinet; other preventives are of doubtful utility; this is certain.

Strawberries—New beds may be made, ff, m. Water in dry weather. Keep free from weeds. Mulch with tan bark or cut straw before blossoming, to keep the fruit from the dirt.

Tomatoes—Transplant from hot-bed, ff, m, and sow seed at same time for late use. Fruit may be secured a week or fortnight earlier by care in transplanting so that the growth is not checked. Set the vines four feet apart each way, if to be trained on horizontal frames—if upright supports are used (see page 148) three feet is sufficient.

Transplanting—This may be done so as to be scarcely felt by the plant. A moist cloudy day is the best time, but if it be dry, first thoroughly wet the earth around the plant, so that it will adhere to the roots. Dig a large hole, and fill it with water; introduce the roots, and sprinkle in earth as the water soaks away. *Put on the top half an inch of dry earth*; this will prevent a hard crust baking on the top, and attract the moisture from below, which keeps the plant from wilting, and it will not be necessary to shade it even, though with tender plants this precaution is useful. If it be necessary to water after transplanting, never apply it directly upon the surface; dig a hole by the side of the plant, and pour in the water—a crusted surface will certainly retard growth, and prevent dews from being absorbed.

Turnips—Hoe, weed and thin those sown previously. Sow for Summer use, f, m. Next month, or the following will be early enough for the Winter stock.

Weeds need no cultivation. To secure a good crop of them, neglect to hoe the paths, and between the rows—they require nothing but to be let alone, when they will soon take full possession.

Winter Cherry (Physalis)—Plant out, f, m, the same as tomatoes, setting them nearer together, say two to two and a half feet distant. Seed may still be sown, ff, m.

Flower Garden and Lawn.

—A busy season is May in the flower garden. Laborers are at work spading and trenching the ground, working in a coating of manure at the same time; others are laying out the beds, and preparing them for planting, some of the female portion of the household follow with seeds, pot plants and bedding flowers, leaving behind them a smooth, even surface, already sprinkled over with blooms of verbenas, petunias, dicentra, carnations, and other plants from the house, with a fine show of hyacinths, narcissus, tulips, and crown imperials. Such a show of bloom, added to the green foliage of the lilies, pæonies, and other herbaceous perennials, with the flowering shrubs, renders the garden "a thing of beauty," even as soon as made up in the Spring.

If new grounds are to be laid out and arranged, no time should be lost. One of the first things after deciding upon the boundaries, is to fix upon and lay off the avenues and walks. Having established a firm foundation, using stones or laying tiles beneath them, to carry off the water as fast as it falls, cover with coarse, clean gravel, a little rounded up in the center. Next arrange the flower beds, grass plots, shrubbery, and trees. For instructions regarding these see pages 146 and 147 of the present month. It is hardly to be supposed that everything will be made complete in a single season.

Annuals—Sow, ff, m, as noticed in the calendar of last month. It is essential that a good variety of fine blooming annuals should now be put in to keep up a show of flowers late in the season, after most of the perennials have cast their blossoms. Those sown in the houses to forward their growth, may now be transplanted to the open ground.

Bedding Plants—Set out a bed or mass of verbenas, another of petunias, with a patch of daisies here, and geraniums or other good bedding plants, somewhere else. The dicentra, lavatera, and salvia are also good bedding plants. This is far better than to mix them up promiscuously. Such beds, of fanciful shape, have a fine effect when scattered over the lawn.

Biennials and perennials should be arranged ff, as they are already beginning to grow. Do not transplant them too often. We have frequently seen pæonies, hollyhocks, lilies, campanulas, etc., kept in a weak state by transplanting nearly every Spring. Where it is needful to increase the stock, remove a portion from one side, and leave the remainder undisturbed.

Borders and Lawn Beds—After planting, rake off, and leave in a smooth, neat condition, with no foot prints upon them. Use a fine toothed iron or steel rake occasionally, after planting, to prevent the earth from crusting.

Box and Grass Edging—Trim or pare the grass borders with a spade, or still better, an edging knife. Set out new borders both of box and turf, trimming the box only to remove the rusty portions, and to keep of even growth.

Bulbs—The earliest blooming are already fading, but there should still be a fine show of crown imperials, tulips, and a few hyacinths. Keep well supported, and stretch a muslin awning over the choicest, to lengthen the period of bloom, removing it at night and during cloudy weather. Set Autumn blooming varieties, ff.

Carnations, Pinks, Picotees, Pansies, Daisies, etc.—Plant out from pits and green-houses, f, m. Keep the flower stalks of those in bloom, securely tied to neat painted stakes. Separate layers, and divide roots to increase the stock.

Cypress Vine, Morning Glory and other annual Climbers—Sow, ff, m, and train upon strings around a central pole as shown on page 339, Vol. 17. Unsightly buildings, rough fences, etc., can be almost hidden beneath a mass of bloom, when covered with these climbers. Screens or lattice work may also have these vines running over them. Cypress vine seeds vegetate much more freely when soaked in tepid water for 12 hours before sowing.

Dahlias, Gladioluses and Tuberoses—Unless already exposed to the sun, put in boxes of earth, ff, and place in a warm, sheltered situation. There is nothing gained by setting out early; m, is about the best season, when the ground is warm and dry.

Dicentra Spectabilis—By all means add this to the flower border, if not already there. Plant and treat as the pæony, which it somewhat resembles in habit of growth. They are easily propagated by dividing the roots.

Drain, ff, any wet portions as directed last month.

Evergreens—This month is the best in the year for transplanting evergreens. They may be set at any time during the month, and even into June, but we prefer planting from the first to the 10th of May, just after the trees have begun to grow. In transplanting, keep the roots from the sun. Hollies, rhododendrons, and other broad leaved evergreens do better when removed with a ball of earth attached. To keep evergreens in a compact shrubby form, cut off the leaders and some of the side branches. If desired for stately trees, do not injure the leaders. Set hedges and screens of Norway Spruce, arbor vitæ, hemlock, etc.

Frames and Pits—These may be emptied of their Winter plants, ff, m. Set them in borders and flower beds, and store away the sashes and shutters for another year.

Flowering Shrubs—Plant, ff, any not already set out. Some of the early blooming are already in bloom, or have even cast their flowers. Plant freely about the lawn, where they have a fine effect. They are also quite appropriate along the borders of the flower garden. See page 146.

Gravel Walks—As soon as the litter and rubbish of the lawn and flower beds are cleared away, attend to the gravel in the walks, spreading out that which was raked in heaps last Fall, and adding new where necessary. Rake off smoothly, and roll with the garden roller.

Hedges—Set out deciduous, ff, and evergreen, f, m. Trim moderately those heretofore neglected.

Hoes will need to be brought into requisition by the middle of the month. Keep the weeds down at the start, and the work will be much easier, besides giving the flowers all the benefit of the manure at the roots and the sun at the surface.

Honeysuckles, Wistarias, Ivy, Bignonias, Clematis and other perennial climbers—Set, ff, if neglected until now. Arrange on trellises or lattice work. Old wood may be layered for an increase of stock. Sow seeds, ff, m.

Hot-Beds—Transplant, ff, m, anything remaining in them, use the manure for enriching the borders, and store away the frame and sashes for another season.

Labels, Stakes and Dahlia Poles should all be in readiness for use when needed. Mark the seeds when sown, by putting in small painted sticks with the names written upon them. It is annoying to have a new plant come up and find you have no means of ascertaining what it is. It is a good plan to make a record and plan of each day's sowing, putting down the kinds of seeds and roots planted, with their exact positions.

Lawn—This has doubtless already been raked over, grass seed sown on any bare spots, and a dressing of bone dust, plaster or fine compost given it, so that a fine, lively green covering gives promise of a compact and firm turf. It will need mowing, m, l, and should be cut very evenly. See page 136 upon making a "Grass Plot."

Mulching—A coating of saw-dust, spent tan, old leaves, muck, or stable litter spread around newly planted trees, will keep the ground moist in time of drouth, and often save the life of an evergreen, that would otherwise die. If unsightly, cover the mulch slightly with earth.

Pruning—Although we oppose cutting off large branches at this season, yet the pruning *knife* may be used where necessary, mainly to cut back last year's growth, so as to form a more compact or bushy head. Young gardeners prune too much. Shrubbery needs to be kept pretty dense to look well. Deciduous trees do not want straight branchless trunks six to eight feet high with long straggling limbs above. Evergreens should branch *quite down to the ground*. Their outer extremeties may be cut back slightly, to make a dense shrub-like growth.

Roses may still be set, ff. Those wintered in the houses or in pits, may be put out, f, m. It is better to turn them out of the pots and set in the borders. Plant freely of this queen of flowers, especially those sorts which bloom several times during the season. Layer old wood, m, l. Tie up pillar and climbing varieties, pruning if needful. If slugs (green worms) appear upon the leaves, ll, sprinkle freely with dry wood ashes, or lime, while the dew is on, or still better, syringe with a strong solution of whale oil soap—say one lb. of sap to six gallons water. A few applications of either of the above will exterminate the present insects, but the bushes must be watched.

Shade trees may also be planted, ff, although rather late for deciduous kinds in this latitude. More care is necessary now than earlier in the season.

Water those plants recently set out, should the weather prove dry.

Weeds should not be allowed to get a start in these grounds. They do much more damage now, if allowed to grow, than later in the season.

Green and Hot-Houses.

Fire heat is now only required among the tropical plants, and occasionally in the other houses during cool or wet weather to dispel damps and keep the atmosphere at as even a temperature as possible. By the middle of the month, most of the plants will have been taken to the open air, and the comparatively empty houses will need little care. The ventilators may be thrown open, and only closed in unpropitious weather. Previous to removing, much pains should be taken to harden the plants by giving abundance of air and gradually reducing the temperature. It is not advisable to be in haste to empty the houses before the weather is settled warm. Frosts frequently occur early in May, and the tender plants from a warm climate (heated houses) are easily chilled, if not actually frozen. In carrying out, take the more hardy first, such as roses, camellias, chrysanthemums, verbenas, etc., leaving the more tender sorts until the middle of the month. Some of the plants will do better when turned out of the pots and planted in the border, while many of

those which continue from year to year, without renewing do better, kept in pots. Set them in a place sheltered from high winds. Some florists prefer placing the pots in the border, setting them in the ground up to their rims. In all cases where kept in pots, they will require more water, and should be cut back with a bold hand.

Azaleas—Water and syringe freely now that they are growing rapidly. Cut back straggling branches to form a compact head.

Bedding Plants—Large numbers of these are now wanted to grace the flower borders and lawn beds. Plant freely in masses, which produce the finest effect.

Cactuses may be readily increased by cuttings put in, ff, m. Examine for and destroy insects.

Camellias—These have completed their bloom and should now be in a fine growing state. Keep them in a thrifty condition, so that good sized healthy flower buds may be formed later in the season. Give them an airy situation, partially shielded from the sun, syringe often to keep down insects.

Cinerarias are still in bloom in many houses. Keep in a warm situation, watering freely.

Cuttings of both woody and succulent plants from well ripened or firm growth, may now be freely made, and struck in prepared soil, under glasses.

Fuchsias—Plant out in borders, m, or shift those intended to bloom in pots. Water freely. Increase the stock by putting in a good supply of cuttings.

Grapes require care according to the degree of forcing they have received. Some vines may now show good sized berries or nearly ripe fruit, and require little water, especially among the bunches. Others are later and need frequent syringings and pinching back. A portion may need thinning with scissors. The borders should be uncovered, manured and forked over.

Inarching may be performed on woody plants that do not root readily by cuttings, such as oranges, lemons, etc., as described under orchard and nursery.

Insects—Allow no stronghold to become colonized at this season. It will be more difficult to dislodge them afterwards. Water and tobacco fumes will usually do the business. Read the illustrated articles upon the "Insect World," and see if some aids may not be introduced to keep the injurious aphides and other insects in check.

Japan Lilies—Plant out, ff, m, and tie up flower stalks of those in bloom. Increase the stock by separating and potting the scales. Plant seeds for new varieties. See illustrated article on page 148.

Layer, ff, woody and herbaceous plants for increase.

Oranges, lemons, oleanders and myrtles—Carry to open ground and water frequently. Plant seeds for a stock.

Pelargoniums—A good stock of these should now be ready for bedding out. More cuttings may still be put in for Winter blooming plants.

Roses may all be removed to the open grounds, f, m. Increase the stock by cuttings, ff.

Water freely, both before and after removing plants from the houses. Evening is the best time to apply it.

Apiary in May.

BY M. QUINBY.

Whenever the weather is wet or cold for a few days, all light colonies will need especial care to prevent starving. When the Spring has been favorable, one stock in 500 on an average, will throw off a swarm during the blossoming of the apple orchards. A larger number will swarm about the time these flowers are gone. But swarming is not general until clover blossoms. In most places, between apple and clover blossoms, there is a scarcity of honey; the bees of very good stocks, at this time having nothing to do, will cluster outside, if the weather is warm; indicating that the hive is crowded, and that a swarm may be expected almost immediately. In a few days, honey will be more abundant; these bees leave to collect it, and the hive presents a deserted appearance, leading to the supposition that a swarm has actually left. These appearances at this season, are not to be depended upon. An examination will generally decide, and save much anxiety. A hive that swarms, changes its queen; the old one does not leave until preparation is made for a successor. Every interested bee keeper will acquaint himself with the appearance of the queen cells; and the swarming season is the best time. Such as have the movable comb hive, have only to blow some smoke among the bees, or sprinkle them with sugar water, to keep them quiet, and open the frames, when every cell may be seen. The box hive must be inverted, and the bees may be kept quiet and driven away from the ends of the combs by smoke. The queen-cells—generally situated on the edges of the combs—from 3 to 20 in number—are about half an inch in diameter and three eighths deep when they receive the royal egg. As the open end is downward, the interior with its contents, if any, is readily seen, when the hive is inverted. When the egg is hatched, the cell, unlike those for other bees, is not full length, but additions are made to accommodate the growing wants of the royal larva, and sealed up when about an inch long. At this period, if the weather is fine, the old queen leaves with the first swarm. By watching the progress of these cells every few days, the issue of the first swarm may be predicted with considerable certainty. If honey is scarce, they will pass this period a little; if very abundant, they will issue a little in advance. If it is suspected that a hive has swarmed, and a thorough examination can discover none of these cells occupied, it is evidence that no swarm has left....When it is more of an object to increase stocks, than to obtain surplus honey, second, and even third swarms in this month may be hived separately. Unless the season is a poor one, they will be likely to obtain stores for Winter. Do not neglect a swarm long, after it has clustered—in this situation, arrangements for a departure are sometimes made somewhat expeditiously. Have the hive to receive the swarm, clean, and not too smooth inside. It is important that the whole swarm—except the few flying—enter the hive. Stirring gently will hurry them on, or, if obstinate, sprinkle with water. Carry to the stand immediately, raise the front half an inch, and protect from the sun.

Notwithstanding all the proof offered by Mr. Doddridge to the contrary, with the additional testimony of the editor, (See Agriculturist for July, 1859.) I will repeat that I consider "no noise is necessary to make them cluster." I have the proof of over 30 years' practice without music, and have superintended the management of more swarms, probably, than most apiarians. Yet I never found the person, whether an advocate for the tin-pan or not, that could count a less per cent in swarms lost than myself. Bees sometimes act very singularly without any music. As not over three or four swarms in a thousand, will leave for the woods without clustering, it is not strange that many persons think *they have compelled* them to do just what they would instinctively have done without interference. When they leave after clustering, it may be attributed usually to bad management, such as allowing them to hang too long when they settle, not getting all the swarm in the hive, raising the bottom of the hive too high, leaving them standing exposed to the hot sun, strong smell of new paint, etc., etc....When the combs of the old stocks are well covered with bees, raise the hive a little in front. Continue to watch the weak colonies for worms, and when the bees increase so as to make examination difficult, split some elders, scrape out the pith, cut some notches cross-wise, and lay them flat side down under the hive. Take them out once a week and destroy the cocoons.

"Shall I buy 'American Guano'?"

[Chapter V, of "Scientific and Practical Talks on Manures," was prepared for this number, but owing to the special interest now manifested in regard to "American Guano," we have deemed it worth while to leave our regular article over to another month, and let the following take its place.]

During the past few months, this question has been addressed to us by subscribers, personally and by letter, a great number of times. In fact we expect that every few minutes during the day, some one will knock at our door, and almost invariably ask on entering. "What do you think of this American guano?" We therefore offer a general reply here. But first let us correct a false impression that we have any "preconceived prejudice" against the article. On the contrary, we would gladly commend it in the highest terms, could we do so consistently with our own views. We dislike as much as any one, the monopoly of Peruvian guano, and would be right glad if American farmers could dispense with its use altogether. We could heartily wish that all that is claimed for the "American guano" might prove to be below its real merits. It would be a national blessing, of more value than all the gold of California. Several enterprising men have devoted their time and money to its introduction, and, so far as we know, they have done this in the belief that they are doing the country, as well themselves, good service, in hunting up and bringing these fertilizers here.

But, as we have said to some of them personally, we think they are guided by an incorrect theory in regard to the wants of our soils and crops; and our present opinion is, that, after a year or two, these purely phosphatic guanos will have had their day, and cease to be in demand by farmers, at least where they have been tried. That some portions of the material brought from the Pacific Islands may prove moderately useful, is probable, for we have seen specimens which contained sufficient ammonia and other organic constituents to warrant the belief that they would be beneficial to crops. And this will, in part, account for the fact that some persons have been pleased with their first trial of American guano. We have examined a dozen different specimens of the material, in its unground, unmixed state, and found them of various composition, running all the way from a nearly pure phosphate, up to one containing a valuable admixture of organic matter including a considerable percentage of ammonia. Now any person chancing to obtain a sample of the last named quality would doubtless see sufficiently good results to lead him to try it further, and to commend it to others. We have seen certificates from such persons. But how many are there in the country who have reaped no benefit? We have heard of many such, yet no one is interested in collecting and setting forth the cases of failure, and farmers, as a class, seldom write out their experiences, unless it is drawn from them, and so we seldom get the dark side.*

We have hesitated to discourage the introduction of the American guano, because we have hoped, that in the progress of the enterprise, there would be found deposits containing *organic* material enough to verify at least a portion of the expectations indulged on the part of the importers, and the public. This may yet turn out to be the case, and we advise those enlisted in the enterprise to turn their attention specifically to the discovery and introduction of organic deposits; for we are firm in the conviction that the purely mineral or phosphatic guanos, such as are now mainly brought here, will not prove profitable or satisfactory. We are aware that the sellers take a different view, and have on their side many scientific men; but we are quite willing to put our opinions on record to be tested by time and experience. In the meanwhile, we must caution not only farmers but the importers themselves, not to invest too largely in a material which is at best of doubtful utility. In our last article on manures (No. 4) we stated, perhaps fully enough, our reasons for calling in question the supposed value of mineral manures generally, including the phosphates.

But whatever may be the character of some of the American guanos already introduced, or of those yet to be found and brought here, we will now only consider the general character of those offered, remarking that the chief excellence claimed for them by those interested, is that they abound in phosphates. We have been furnished with the following recent analyses of several

* An illustration may be given of the fact referred to above. A few years since, one of the special pleaders for super-phosphate visited a New-England town, and lectured so strongly in favor of the use of this material, that the cultivators at once made up orders for some 80 tuns, at a cost to them of nearly $4,000. It proved a failure, and we believe not a pound of it has since been sold there. But the buyers quietly pocketed the loss, acknowledged themselves sold, and discarded all scientific teachings in regard to agriculture. But no one of them ever took the trouble to collect and publish the facts. On the other hand, in another town, one man obtained, or thought he obtained, good results, (perhaps he had an extra good sample,) and on application he gave his certificate in its favor. That certificate, and a few others of similar character, were published all over the land by interested parties, and very many persons bought super-phosphate on the strength of them. We only mention this as an illustration of how one-sided statements may sometimes go forth, and further to invite those who try any new fertilizers to report their *failures* in all cases. Let us have both sides.

cargoes, and the remarks thereon by Prof. S. W. Johnson, who conducted the experiments.

YALE ANALYTICAL LABORATORY,
NEW-HAVEN, Conn., March 16, 1860.

JOHN B. SARDY, Esq.—*Dear Sir:* This may certify that I have inspected the discharged guano cargoes of the ships Gosport, Rambler, and Polynesia, late from Jarvis Island, have had average samples taken in my presence, and have submitted the same to chemical analyses, with the following results. The table also includes analyses of a sample of the Victory's cargo, Jarvis Island, and of a specimen from Baker's Island.

Ships	Moisture	Organic matter and combined water	Lime	Phosphoric Acid	Sulphuric acid (uncombined and estimated)	Undetermined matter and loss	Bone Phosphate of Lime equivalent—average, per cent.
Gosport	9.33	13.37	33.88	21.81	20.33	1.28	47.47
do.	9.94	13.22	33.59	22.01	20.33	1.61	
Rambler	13.22	8.39	34.17	19.10	25.07	.05	41.47
do.	12.69	8.97	33.68	19.18	25.07	.41	
Victory	7.08	7.75	36.31	25.67	21.75	1.84	55.01
do.	8.85	6.65	36.33	25.12	21.75	1.60	
Polynesia	12.00	7.70	34.83	26.47	13.85	3.15	59.17
do.	12.41	7.34	34.67	28.15	13.85	1.58	
Baker's Island	3.57	8.25	41.54	39.24	2.16	5.24	83.93
do. do.	3.58	9.02	41.09	38.24	2.16	5.91	

These cargoes together show an average of Phosphoric Acid equal to 50 per cent of Bone Phosphate of Lime, which is sufficient to constitute a valuable fertilizer, especially since the material is, on the one hand, very finely divided, and on the other, contains considerable organic matter, and Sulphate of Lime, which, being themselves easily decomposable or soluble, must leave the Phosphate of Lime exposing a great surface to the solvent action of the soil water. Simple calculation shows also that in the Jarvis Island Guano, by far the largest share of the Phosphoric Acid exists in the form of what is commonly called *neutral Phosphate of Lime*, which is characterized by a much greater solubility than is possessed by the Bone Phosphate. For these reasons this guano must manifest greater activity than other guanos which are more compact, and consist mainly of Bone Phosphate of Lime....

SAM'L W. JOHNSON, Prof. of Analytical and Agricultural Chemistry, Yale College.

Probably Prof. Johnson designed the above simply as a professional private business letter; he should have stated the results differently, if for the general reader. The second column, "Organic matter and combined water," gives no valuable information. We are left in entire doubt as to *how much* of it is "combined water," and *how much* is "organic matter." So also, we have no indication whether the organic matter is simply useless or nearly useless carbonaceous material, or whether it contains an appreciable amount of useful nitrogenous compounds.

We have confidence in Prof. Johnson's skill and integrity as an analytical chemist, but we must differ with him in regard to the value he attaches to these guanos, and to phosphoric acid generally. He estimates *soluble* phosphoric acid as worth 12½ cents per lb., and the *insoluble*, at 4½ cents per lb Upon this basis the "Sombrero guano" imported into southeastern Connecticut quite largely, was estimated to be worth over $30 per tun. Many of the farmers who bought it upon this estimate, and have tried it, would not now buy it at any price.

Prof. Johnson, very guardedly says above: "*Simple calculation shows, etc.*" But we think these calculated values of phosphoric acid are not to be depended upon in estimating its real value as a fertilizer. If the phosphoric acid in Peruvian guano really constitutes the *estimated* part of the value of that material, then we admit the calculated value of phosphoric acid in other fertilizers; but *we* attribute the beneficial effects of Peruvian guano, bones, etc., mainly to the organic matters, and especially to the ammonia they contain.

The above analyses show the elements of a notable amount of sulphate of lime (plaster of Paris) in the first four specimens. This is highly valuable upon some soils and crops, while on others it is nearly or quite useless. We have seen surprising results from the use of only 200 lbs. of plaster to the acre. And here is another mode of accounting for the occasional good results obtained last season from the American guano. The use of 300 to 600 lbs. of this to the acre, would furnish plaster enough to alone give good results in some cases. But farmers can not afford to buy plaster in the form of American guano at $30 to $40 per tun, when the simple unmixed plaster is abundant at $6 to $10 per tun.

To sum up: the American guano is recommended and sold mainly as a fertilizer abounding in phosphoric acid, and this in our opinion is of only moderate value at best*—not enough so, to at all warrant its importation from the Pacific Ocean. Good results have sometimes been obtained by the use of the American Guano, especially where it has chanced to contain abundant organic matter, and also where it has been used freely enough to supply plaster to the soil. But the results have not been uniformly good by any means, and the present importations do not contain organic matter enough to be taken largely into account in estimating their value. Therefore, basing our opinions in part upon the considerations stated above, and in part upon the reports of the results of its use thus far, we are reluctantly forced to answer those asking our opinion, that we can not advise farmers to purchase the American guano in quantity, until something is offered of different general character and composition from that now sold. Limited quantities of it may be tried by the side of other fertilizers.

* There is one view of the value of soluble phosphoric acid which we have not seen stated, viz: that like other acids it may act as an absorber or retainer of ammonia, and so far it may be valuable to soils; and this may account for the good results obtained from the use of the soluble phosphates. But in any form in which phosphoric acid is accessible, it costs vastly more than sulphuric acid which is a notable "fixer" or retainer of ammonia.

"What Manures Shall I Buy?"

"If you do not advise to use the manufactured super-phosphates, or the manipulated guanos, or the Sombrero, in short, any of these mineral fertilizers, pray tell us what manure we shall buy?"

Perhaps you need not buy any. If on the better class of prairie, or on other lands where there is plenty of vegetable mold upon the surface, then a good plow and a good harrow, to break up and pulverize the surface well, so that the air may have free access to decompose the organic matter, may be the best "manuring" you can give this year. An application of alkali, in the form of ashes or lime, mingled with the soil, is frequently good to remove sourness, and hasten the decomposition of the organic materials, and prepare them to feed the plants. Alkalies are good on all cold, wet, or sour lands, wherever located.

On the poorer lands, especially in the older sections of the country, get the best *organic* manures that are accessible. Good stable manure is always the best, and usually the cheapest, where it is to be had. Next to this we esteem finely ground *unburned* bones—not so much for the phosphoric acid they contain, as for their organic matter. We have this Spring bought of Messrs. A. Lister & Co., of Tarrytown, N. Y., 1½ tuns of dry bone saw-dust, for 1½ acres of ground which we wish to cultivate very highly. (We mention this to show that we 'practice what we preach.')

Next to unburned bones we esteem pure Peruvian guano, the kind that costs $60 per tun—not the "manipulated," nor the "No. 2," which is sold at a less price, after going through some process of reduction. This, sown in the drill at the rate of 100 to 500 lbs. per acre, and well harrowed into the surface, or scattered as a top-dressing, is usually a paying application. The amount per acre depends upon the poorness of the soil. For high culture, as in gardens, 600 lbs. or more per acre will not be amiss.

Next to Peruvian guano, try—well, we hardly know what to recommend, for there is little else in market always worth buying at the price asked, and the transportation. There are several varieties of animal compounds, made in limited quantities, which are sometimes cheap at the prices asked for them, and sometimes not. We hardly dare recommend them for general use. Among them are: the blood and wool manure, when purely blood and wool, and not mixed up with sand; the poudrettes, when not too liberally compounded with muck, and when the excrements, from which they are made, have not been taken from cess-pools where a constant flow of water has washed out the most valuable portions. A fuller description of the fertilizers above alluded to, and others, will be given in the regular chapters upon manure.

Letter from Timothy Bunker, Esq.

JAKE FRINK SOLD.

MR EDITOR: The Spring work came on so sudden, that I did'nt get time to say any thing about Hookertown folks, last month, and now I would'nt say a word, if it were not for fear that other folks would get taken in just as bad as neighbor Frink. You needn't think that Jake's body has been put up at auction; but, what is about as bad, his wits have been in the market, and gone to the highest bidder. Now, you see, we have got our full share of poor land up here in Connecticut, and of all the land in these parts, Jake Frink's is about the poorest. He has a lot of twenty acres, lying up towards the Whiteoaks, a poor worn out sheep pasture, not worth to exceed five dollars an acre. He bought it a dozen years ago, and gave a hundred dollars for the lot, and it has not improved any under his cultivation. All he has ever done for it, has been to plow up occasionally a patch of it for buckwheat, or for rye. The rest of the time it has been pastured with sheep. It is a light, sandy loam, bearing a plenty of five fingers, and mullen, and a little red top, with other wild grasses. Jake was upon this piece of land last Summer, plowing for buckwheat, when a fellow came along in a fine carriage, with a span, and inquired for Mr. Frink—Jacob Frink, Esq, he called him. As Jake tells the story, he was considerably elevated, to hear a well dressed city gentleman calling him "Esq."

"So I holler'd whoa to old Buck and Bright, and axed him what his name might be, and where he was from. And he said:"

"I'm Mr. Smith, the senior partner in the firm of Smith, Stubbs, Darby & Co., of Philadelphia, proprietors of the patent for the improved, imperial, nitrogenized Tafeu."

"Wall now, I'm Jake Frink, and nothing else, and don't know enny thing but English, and not much of that. I don't know what Tafeu is, never heard of it."

"Just so, Esq. Frink, I should think from the looks of this field, that you were a stranger to the most remarkable manure ever invented for the improvement of the soil."

"Oh! it's a manure, is it!"

"Yes, sir-ee, a wonderful fertilizer, that will grow forty bushels of wheat to the acre, one hundred of corn, and from three to four hundred of potatoes. It is great on grass, bringing up such poor sandy land as this to a production of four tuns of hay to the acre. It has the happiest influence upon fruit trees, making the wood grow

rapidly, and adding four-fold to the fruit. By the use of this Tafeu, the produce of a farm may be doubled the first year, and quadrupled the second. Every man who purchases the article is sure to get rich."

"You're jest the man I've been wanting to see this many a year. You see I've been farming on't, this well nigh thirty year, and I han't got all my land paid for yit. I am all the time cramp'd to git along, and if you've got a resate for making folks rich, ye see I shall go in."

"But I have not got the Tafeu along with me, to sell this morning, I am securing agents to dispose of it. I sell rights to towns, and to counties, and the man who gets the right to sell the article, makes his fortune, the first season, while the man who buys will have to wait a little. For instance, if Esq. Frink, buys the right for Hookertown, and sells a thousand tuns he makes five thousand dollars, for we allow our agents five dollars a tun on the sales. You have in town at least two hundred farmers, and they will want on a safe calculation five tuns of Tafeu, each."

"Yes we've got more'n four hundred farmers in town, and I'm the chap that can sell the stuff tu 'em, if there is any vartu in talk."

"You see," continued the fluent Mr. Smith, "I sold the right to Col. Babcock, of Spruce Hill, last year, and he told me he made over ten thousand dollars, and there are hundreds more I could mention in other States, that have made handsome fortunes out of our fertilizer, the first season."

"And how much are you going to ax for the right to sell in Hookertown?"

"Well we generally sell county rights, for fifty dollars, and town rights for about ten, a little more or less according to size. But seeing it is you, Esq. Frink, we will let you have the Hookertown right for nine dollars."

Jake Frink is not a monied man, but he happened to have just that amount in bills in his wallet, and he handed it over to the oily tongued Mr. Smith, who delivered him his right to sell Tafeu in Hookertown, duly signed and dated. He told Jake as he drove off, that a cargo would be in from Philadelphia, and delivered at the landing next Saturday.

Saturday came, and Jake went down with his old bob tailed mare, bright and early, expecting to see a schooner discharging Tafeu. But he found nothing but a coal vessel at the dock, and the captain had never heard of "Smith, Stubbs, Darby & Co.," and doubted very much whether there was any such firm in Philadelphia. The next Saturday came, and Jake, thinking he might have misunderstood the day, went down again, but no Tafeu vessel had arrived. Jake now began to suspect he was sold, and scolded some, if not more. His golden visions became dim, as the weeks wore away, and no news came from Mr. Smith and the cargo of patent fertilizers. He has not heard from him since. Jake is particularly sore about this Tafeu business, and his neighbors, especially Jones and Tucker, when they wish to touch him on the raw, inquire for the price of the Philadelphia fertilizer.

Now, I suppose there are thousands of dollars taken out of the pockets of farmers in just this way every year. Some of these concentrated fertilizers I suppose are worth the money paid for them, but the chances are, that a man gets cheated when he buys them. This is pretty certain to be the case when they are bought of traveling agents like Mr. Smith. It is worse than highway robbery, for you do not know that you are robbed until the thief is out of your reach.

However, "there is no great loss but what there is some small gain," and Jake Frink claims that he has got his money's worth in experience. He says he "should jest like to see a man come along and undertake to sell him patent manure agin. Wouldn't he catch it?" Jake put into his yard last Fall double the quantity of muck I ever knew him to cart before, and, judging from the quantity of manure he has spread this Spring and plowed in, he will be a gainer by his experience. BEWARE OF PATENT MANURES.

Yours to command,

Hookertown, Ct., April, 1860] TIMOTHY BUNKER, ESQ.

A Talk about "Long Island Lands."

"Bogus Land Advertisements"—Discussion of defects in the subsoils of Long Island and elsewhere.

For some time past, there have been extensive efforts to bring into favorable notice certain tracts of land situated on Long Island. These efforts have consisted of advertisements in distant agricultural and other newspapers, correspondence referring to them, etc. More especial attention has been directed to advertising in the New-England States, and from that direction we are in the constant receipt of letters of inquiry. In our March number, page 91, we responded to one of these queries, intending that answer for a great number of others. Since then, *six different persons* have called upon us, each one of whom considered himself specially aimed at in our March paragraph, and each one protesting against it. The gun proved to be more heavily loaded, and to have "scattered" more than we anticipated.

In some quarters our motives have been impugned, and intimations of "prejudice," etc., have been thrown out. As we shall probably have more to say on this subject, let us premise here, that our *home* is on Long Island; that we expect it always will be there, as we hope never to "move" again; that we cherish a peculiar regard for the credit of our "adopted country" as a whole; that our only political aspiration is to be governor of Long Island, *when* it sets up for an independent State; that we desire to see the largest possible number of intelligent cultivators on our Island; that we will do anything and everything consistent with truth and honesty, both in our public and private capacity, to set forth the good qualities of every part of Long Island, and to defend it against the aspersions of all and sundry persons, whomsoever and wheresoever. We can not even think of a single motive, personal or otherwise, that would lead us to be "prejudiced" *against* a single foot of land on Long Island—if we have any prejudice, it is all the other way. After this general disclaimer, we shall hold in proper contempt all intimations of "prejudice" against our own chosen Island.

Here is the offending paragraph in our March number, which has been the cause of the dissatisfaction, expressed not only in a batch of communications now before us, but by those who have called to "set us right":

"BOGUS LAND ADVERTISEMENTS.—W. F. B., "Franklin Co., Mass. We know little of the lands "you inquire about. There are doubtless some "chance plots which might be selected by a com- "petent judge on the ground, but the good quali- "ties of a majority of the magnificent farming "lands advertised there, and at other points at "the East, are *on paper*. It's all nonsense to talk "of large tracts of good land near New-York, "Philadelphia, etc., as having remained over- "looked to this day."

We wrote the above in good faith, and we still stand up to it—it expresses exactly what we wanted to say, and what we still say. As we shall show further on, "there are chance plots of land" on Long Island which are now unoccupied, and which can be bought at a moderate price—a price below their real worth, considering their location and climate; and a "*competent* judge" going upon the ground, could make a selection that would be a capital investment. There are many such plots, but the proportion of good land to poor, is so small comparatively, that incompetent judges would be quite likely to be deceived in purchasing. We are of course speaking only of those portions of the Island now uncultivated. A considerable part of the Island is occupied by thrifty cultivators, especially on the north and south shores.

We have studied the geology of Long Island somewhat, and have personally examined the soil in some places—with the design of purchasing some of the "cheap land" for cultivation, if found worthy. The location is desirable, and the climate good, except for those predisposed to diseases of the lungs. Some persons of this class find the sea breezes not conducive to their health. But taken as a whole, the climate is genial and every way a desirable one.

There are many thousands of acres of land, particularly through the middle of the Island, which are as yet uncultivated wastes. Most of these are owned by individuals, in tracts of considerable extent, and the effort is being made to show that their good qualities have been overlooked, and that they are really valuable for cultivation. We wrote that "it is nonsense to talk of large tracts of land near New-York, Philadelphia, etc., as having remained overlooked to this day," referring to certain largely advertised sections east of Philadelphia, in New-Jersey, and also these Long Island lands now under consideration. This statement is a reasonable one. Long Island has been settled 200 years, and is it possible that the tens of thousands of intelligent, acute farmers, who have passed their lives upon the Island, living all around these uninhabited tracts, should not have discovered their good qualities in 200 years? The truth is, they *have* tried them again and again, and then passed them by.

Those who have written upon the Long Island lands, and talked of them at the so-called "N. Y. Farmer's Club," have too often formed their opinions from superficial observation. A stranger, going over these uncultivated lands, and looking at the surface only, would very naturally wonder why such soils should lie idle near the greatest market on the continent. But the trouble is *below* the immediate surface. Let us look into it.

During the past month we dug a cess-pool for draining. (This was cheaper and more convenient than to cut a deep drain across adjoining lands.) The first foot of surface was a good loam, mixed with organic matter. Below this we came to what is termed a hard-pan—a close, compact, gravely, clay loam, moist, but too compact to allow the water to pass readily through it. This layer extended for about 12 feet. Below this were 5 to 6 feet of more gravely soil; and at the depth of 17 feet we reached coarse rounded gravel, running into well washed coarse sand, as sharp and clean as the best sea-shore sand. It contained bits of woods and other remains, just such as we find upon the sea-shore.

A pail of water poured upon it, sunk out of sight in less than half a minute. We dug into this 6 feet, and found it perfectly uniform. We stoned up the excavation, and have no doubt but all the water from underdrains in the adjoining lands will be carried off. A well, near by, was sunk through this same uniform sand for a distance of 40 feet, when reaching the tide level,

the sand was found saturated with water, and a permanent supply was secured, the water standing 60 feet below the surface.

Now on this land we have a bed of *water holding* soil, at least a dozen feet in depth. In hot weather, when the surface is dry, this water-holding bed supplies moisture from beneath. Without this source of moisture—this cistern, so to term it—the plants would dry out in hot weather, *no matter how good the character of the surface soil.*

The water is drawn up from the subsoil by capillary attraction, as it is termed. But if, for illustration, there were a thin layer of coarse gravel, one, two, or three feet below the surface, this water would not rise through it, because the tubes, that is the crooked interstices between the particles of soil, would be too large. Water rises by capillary attraction in small tubes only. If we had a good surface soil, then a thin gravelly bed, then a water-holding bed, we could break up the gravel, mixing with it some fine soil, and in this way establish a capillary connection between the surface soil, and the water-holding bed. There are many farms, both on Long Island and elsewhere, which are now barren, but which by the process indicated, might be made prolific.

About 20 rods from our cess-pool, a neighbor dug one on the same level of ground, but did not find sand until 25 feet below the surface. Eighty rods distant, sand was reached 12 feet from the surface. In our neighborhood the depth to the sand bed varies from 10 to 50 feet, all within a mile, and this on the same level of ground.

Now then, let us apply these illustrations to the waste lands on some portions of Long Island. The bed of sea sand and gravel described, extends under the whole, or at least under the greater part of the Island.* The upper surface of this sand bed varies greatly, in some places rising to the top of the ground, and in others it is at a great depth below. Within a single mile, the variation amounts to 40 feet at least, as is plainly proved in our own locality.

Again, there are, in many places, beds or layers of coarse gravel, interspersed *in* the water-holding soil itself. These also vary greatly in their depth below the surface. When they come within 2 or 3 feet of the top, the land is termed "leachy." Farmers say, manure does no good, "it leaches down and is lost." From what is above stated, it will be seen that it is not so much the leaching of the manure that renders them unproductive, as the want of a water-holding bed, to supply moisture when the surface is parched in Summer. The nearness of the general sand strata, or of a gravel or coarse sand bed, shuts off water from beneath.

The reasons for our remark that "there are chance plots which might be selected by good judges on the ground," will now be apparent. Those "waste lands" are variously made up. In some places the surface is too sandy for culture. In others there are large tracts, having apparently a good soil upon the surface, but not depth enough of water-holding soil above the sand, or above a gravel bed, to sustain the crops. But scattered over these, there are occasional spots, where the sand or gravel bed *dips down in a basin form*, leaving a thicker layer of good water-holding soil. And so we find many excellent farms, or garden spots, in the midst of surrounding sterility, when the superficial observer sees no reason why all the land, having a similar surface soil, should not be equally productive. Some persons are now buying these thin lands—to find out their mistake, when they attempt to cultivate them.

We once seriously thought of buying a farm, out towards the middle of the Island, on which the surface soil was excellent; and the season being wet, the crops then growing were good. We were disposed to attribute the bad reputation of the farm to bad cultivation. But before closing the contract, we took a spade in hand and dug "post-holes" here and there, which revealed a general gravel bed lying at a depth of 12 to 36 inches below the surface. Our knowledge of geology in that case saved us from a bad investment, and the loss of money and time. We have looked at this matter a good deal, aided by many communications, and many hours of time passed in conversation with those having land to sell. Our readers have the benefit of our own experience and observations. They can take our opinion for what it is worth—it may be wrong, but it is not over-hasty, nor prejudiced by any outside influences. We shall spend much time yet in investigation. If a tithe of what "they say" of Long Island lands be well founded, there is yet a mine of wealth in them; but we still think that while "there are doubtless some (we will say many) chance good plots," much of "the good qualities of the magnificent farming lands advertised there (on Long Island) *are on paper*."

* Long Island is about 113 miles long, from its most western to its most eastern point, and varies in its general width from 12 to 20 miles. It contains some 1448 square miles, or in all about 925,000 acres.

Making a City Grass Plot.

To the Editor of the American Agriculturist:

Here in the City we have but few green things at best, brick walls and stone pavements monopolizing most of the space. There is one little spot, however, which all housekeepers insist upon having, even in cities, and that is a snug little grass plot. This serves the double purpose of giving a green spot to relieve the eye—a luxury we citizens much enjoy—and also to give us a "bleaching" place for our linen. These grass plots frequently become so poor that they are of little value, and it takes some time to get a new one established from seed. In the country, fresh turf can easily be had, and a plot soon be made by sodding. Having had several run out beds renovated, with good success, I give my plan as follows: first remove what turf there is, laying it aside carefully; next spade up the bed thoroughly, working in some compost where it can be had. I then cut the old turf into pieces a few inches square, and set out all over the bed about one foot, or less, apart, covering with a very little soil. They root quickly, and soon make a compact turf over the entire space. I usually scatter a little lawn grass seed over the bed just before a rain, after the whole is complete. So well do I like the plan, that I should chop the turf up in this manner, even if I had abundance of it.

Brooklyn, April 14, 1860. HOUSEKEEPER.

Not too Late for Clover.

Although April is preferable for sowing clover seed in this latitude, it is better to try it even now, if done immediately, rather than lose the use of unoccupied ground, or suffer it to become a nursery of weeds. By sowing just before a rain, the seed is washed into the soil, and has a fair chance to germinate. Some object to sowing clover alone, because the full power of the sun destroys the roots, and it is therefore usually put in with grain, to secure partial shade; but in good soil the leaves soon spread enough to protect the roots. For turning under green to improve the soil, there is probably no crop superior to clover, and if wanted for this purpose there is yet ample time. There are hundreds of farms, now only an expense to their owners, that might in a few years be made to pay handsomely by the judicious application of clover seed.

Sheep Washing and Shearing.

To the Editor of the American Agriculturist:

Ever since I worked out by the month, I have had a dread of sheep washing, as it is usually done. A dam was thrown across a small stream, making a pond, and a pen for the sheep built by the side of it. We stood in the water waist deep, and took a half bath for two or three hours at a time; the sheep were thrown in heels over head, and soused, and squeezed until they were pretty well worried out. The water was not always comfortably warm, and we often had a blue and shivering time, notwithstanding the whisky and cider brandy which were poured down to keep the cold out, but which sometimes only drove the wits of the men out. I have now a much more comfortable plan. A large vat made of plank, about ten feet long, four feet wide, and three and a half feet deep, is placed near a stream where there is sufficient fall. Troughs are laid to conduct the water, with their lower ends standing about two feet above the vat. Two boys each have a sheep *soaking* at one end of the vat, while two men standing on the ground outside the vat, each hold a sheep under the stream running from the troughs. It requires but little squeezing of the wool and much less time, to wash them well, than by the old method. It dispenses with all rum, and consequently we have no *rumpus*.

After the sheep are washed, they are turned into a clean pasture, and not sheared until the weather is too warm for flannel jackets. The man that will send a poor sheep naked out into the chilling winds that often make fire necessary in May, ought to be put to sleep on frozen ground next Winter, with only a snow drift for bed clothes.

To shear a sheep well, requires practice and patience. A man in a hurry, ought to leave the shearing floor until his hurry is over, for he will be likely to butcher as well as shear the sheep, or else leave the wool in ridges like a new plowed field. To have the sheep quiet, keep him in an easy position; to cut the wool easily and even, let the surface over which the shears are passing be kept rounded out, and the skin drawn smooth.

My way is, to set the sheep on his hind quarters upon the floor, with his back towards the shearer. While in this position, the brisket, belly, and edges of the flank and thighs are sheared. Then the operator kneels on one knee, lays the sheep's neck over the other knee, and shears it carefully on the left side, up to the head. He then stands upon his feet, bends the sheep's head to the right side, and shears the fore leg and left side around to within one or two clips of the back bone, and so on to the thigh. The sheep is then laid on the broad side, the hind leg extended with the shearer's left hand, and the wool clipped from that and the buttock. The knee of the shearer laid over the sheep's neck keeps him quiet. The wool left while going down the back, is cut with clips lengthwise along the spine. The sheep is then set up again and the other side finished in like manner. All tag locks, burs, etc., should be re-removed before shearing, and the floor be swept frequently to keep straw or dirt from the wool. A very little carelessness will make a very great difference in the aggregate price obtained for the clips. JONATHAN.

For the American Agriculturist.

Cure for Gapes in Chickens.

I have tried the following plan, and found it a certain cure for gapes in chickens. Take a medium sized broom splint, with a sharp knife make two or three barbs near the large end. Open the mouth of the chicken, having its neck drawn straight, and, as the wind-pipe is opened for breath, put in the instrument, and, running it carefully down the full length of the wind-pipe, turn it around and draw it up, when one or more small red worms, an inch in length, will be found caught in the barbs. I have taken out four worms at one insertion. Two or three operations are often necessary, but if faithfully performed, the remedy is sure. E. R.

Apoplexy in Fowls.

A subscriber writes for information about a disease which affects his fowls. The symptoms are loss of muscular power in the wings and legs, causing them to droop and stagger about, and soon to die. These appearances correspond to what is termed apoplexy, resulting from too high feeding. It is sometimes caused by confining the fowls to corn meal, or by feeding hemp seed and similar oily, hearty food, and is difficult to cure. A preventive is a change of diet. Give lighter grain, as oats, buckwheat, etc., and plenty of cabbage leaves or other green food, chopped fine, with milk curds, if they can be had.

For the American Agriculturist.

The Domestic Turkey.

Next to the common fowl, the turkey is the most useful, important, interesting and valuable, of domestic fowls. It is the most recent of our reclaimed birds; the care of it is quite an interesting part of rural economy; and it is generally admitted that turkeys are entitled by their appearance to be called the nobility of the poultry-yard.

Buffon remarks that it was unknown before the discovery of America. The Spaniards call it the "Peacock of the Indies," because its tail somewhat resembles that of the peacock when spread.

The domestic turkey differs in no way that I am aware from the wild, except in the variety of colors, which vary from a pure white, through all shades, to a jet black. Among the *full* colors, also, we have the buff or copper-colored, the slate or dove colored, which many prefer, simply I believe, as a matter of taste, as I have never discovered any superior merit either in the habits or flesh of such varieties. The dark colored, particularly the bronzed, are generally considered the best, hardiest and heaviest birds; the white variety the most delicate, and difficult to rear. These with their red head and caruncles, contrasted with their snowy whiteness, make a very pretty appearance, and when feeding on the lawn add much to embellish the grounds around the mansion.

The dark varieties are always most marketable; their skin being white, and their flesh firm and sweeter; while the males are larger, and the females are considered much better breeders.

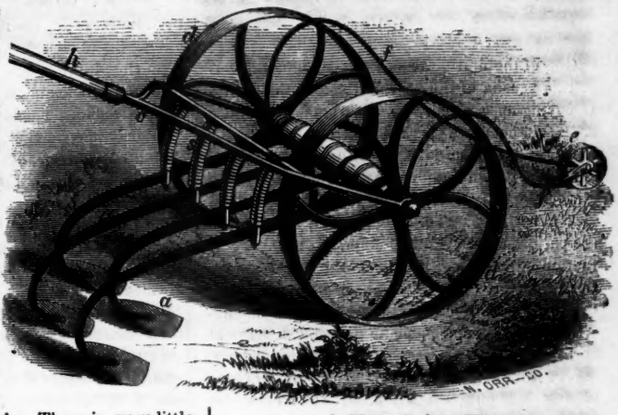
In rearing turkeys, the first great requisite is to have good stock to raise from, both male and female. The cock turkey should be of large size, and as he does not attain his full growth till he is two or three years old, one of this age is to be preferred, though yearlings are generally made to answer. The color should be jet black or bronze with legs to match. There is very little difficulty in finding a cock turkey whose strut is sufficiently martial to satisfy the most precise stickler for a military carriage. With tail spread and erect (as illustrated opposite), and breast inflated, he marches, and counter marches, a perfect Captain of the poultry-yard. Usually not more than three or four females should constitute his harem. A great point is to prevent deterioration of stock by breeding in-and-in. It is, therefore, good policy to introduce a cock-turkey from a neighboring stock at least every second year. A strong and healthy brood of chicks is thus secured.

The turkey is an out-of-door bird; and in this respect he retains, even in his domesticated state, that love of freedom which characterizes the Indian race of our country. The average size of the domestic turkey is about the same as that of the wild bird, but the former often excels in weight, when carefully bred. It is not uncommon for well fatted cocks, from seven to eight months old, to weigh from ten to fourteen pounds, and hens to weigh ten pounds. Cocks of one year old have been pushed to the weight of 25 pounds, dressed.

Po'keepsie. C. N. BEMENT.

Driving A Nail.

"A very simple operation which any fool can perform," says the reader. Not too fast. Scarcely one person in a dozen can drive a nail well. Of course, *practice* is essential to skill, but a little "gumption" is needed, and perhaps a little instruction may not come amiss. *First*, set the nail in all cases, so that its least width at the top stands across the grain of the wood. A carpenter would laugh at so simple a direction, but every second boy, and perhaps every third man is just as likely to set the widest part of the nail *across* the grain as with it, and thus split the wood. *Second*, a succession of light blows will often drive a nail home without splitting, when two or three heavy blows would split or crack the wood. *Third*, simply wetting a nail will often make it enter much easier. Oiling or greasing will do still better. *Fourth*, annealing or toughening nails so that they will bend, or clinch, is easily done. Some do this by heating them to redness on a shovel, and then pouring water on to cool them. This toughens them somewhat, but they are still better when allowed to cool slowly. The best plan is to make them red hot, and immediately cover them with ashes or dry sand, so that they shall cool very slowly. Common nails are cut when nearly cold. Heating and slow cooling afterward gives them a great degree of toughness, almost equal to that of wrought nails, which are worked hot and cooled slowly. For all work, where the nails are to be subjected to bending, or to be clinched, they should be prepared in the manner described.



A New Onion Hoe.

Those who have cultivated onions to any extent, need not be told how laborious is the indispensable work of keeping out the weeds. With corn it is comparatively easy, with a few well directed strokes of the hoe, to cut them down, but when they intrude among the compact rows of onions, it is necessary to move carefully, working all the time in one direction, and even then to go down upon one's knees, and finish with the fingers. Many implements have been constructed to aid in this operation, but so far, cultivators depend chiefly upon a light-bladed, wide hoe. Mr. John Guyer, Fairfield Co., Conn., has shown us an implement of his invention, illustrated above, designed to work the ground thoroughly between the rows more rapidly and easily, than can now be done.

Four small pointed blades, *a*, are riveted to curved arms, which are attached to and play up and down upon the axle of the wheels, *d*, *d*. Two rods, fastened by nuts to the ends of the axle, pass up in front of the wheels, and are welded together at *e*; a shank drawn out from *c*, is riveted in the handle, *h*, only part of which is shown. A cross-bar between the point *c* and the wheels connects the two side rods, and from it four arms extend downward, each receiving one of the horizontal curved arms first mentioned, in a slot left for the purpose. Spiral springs, *s*, surround these slotted vertical arms, and serve to keep the hoes down to their place, but admit of either hoe rising to pass over a fast stone or other obstruction. Two small rods, *f*, *f*, play upon the ends of the axle of the wheels, *d*, *d*, and are curved to fasten upon the ends of the axle of the small wheel, *e*.

In working, the implement is pushed forward between the rows by the handle, *h*, the depth of the hoe furrows being regulated by lowering or raising *h*, thus increasing or diminishing the pressure upon the springs, which keep the hoes at their work. The wheel, *e*, two inches in diameter, passes under the onion tops that may have bent down over the rows, and they are pushed aside by the small rods, *f*, *f*, out of the way of the wheels, *d*, *d*. The inventor claims that at least four times as much in a day can be accomplished with it, as with the common hoe.

The implement is small and compact, two feet long, nine inches wide, the large wheels nine inches in diameter. The whole weighs about eleven pounds. The size, however, can be varied to suit different crops. It is drawn large in the illustration, to show the parts distinctly. The

retail price, we believe, is five dollars. Mr. Guyer states that it was tested to some extent last season by extensive onion growers in Connecticut, several of whom have adopted it.

Clean Cellars.

One of the first duties of every householder, at this season of the year, is to clean his cellar. Decaying apples, cabbages and roots of various sorts, old beef and pork barrels, rotten boards and whatever else is subject to decomposition, should be gathered up and carried into the open air, or be put in a condition to produce no unpleasant effluvia. To sweep, dust, and bedeck the parlors above, is not enough. If there is corruption in the cellar, it will find its way among the carpets and rose-wood of gilded mirrors in all the upper rooms, making the air offensive and unwholesome. The occupants of a house are not so likely to notice these smells as their visitors.

Now, to avoid all this, begin the month of May by a thorough purification. Throw open the doors and windows of the cellar, and clear out all decaying matters. Sweep the floor and walls. Give the walls a good coat of whitewash; this will extirpate vermin, sweeten the air, and give the cellar a neat and tidy look, making it rival the parlor in its way. If provisions, or other substances liable to decay, have to be kept in the cellar during the Summer, chloride of lime should occasionally be sprinkled over the floor. Keep the windows open for a free circulation of air, guarding them if necessary, by a wire netting.

Deep or Shallow Vessels for Milk.

To the Editor of the American Agriculturist.

Many suppose that the quantity of butter obtained from milk depends greatly upon the treatment before churning, particularly upon the kind of vessels it is kept in. Thus some prefer deep pans, and some will use none but shallow; some add saleratus to the milk to keep it sweet longer to give the cream more time to rise. Experience has convinced me that the amount of butter depends on the quality of the milk, rather than on its management. All the butter contained in the milk can be obtained, and no more. I remember fifty years ago that my father, who had thirty or more cows, tried several experiments to ascertain this point. He first procured large flat "keelers," 'wooden tubs about four inches deep,' but the labor required to keep them sweet was so great that a number of twelve-quart tin pans were also used. There was no difference in the amount of butter obtained from each. After this he was persuaded to have smooth oak tubs made, each holding about four gallons, having been told that the milk would remain sweet much longer in them and the cream would be increased, but there was no improvement in the quantity. I have for years used twelve-quart tin-pails for convenience in handling, and find by keeping the temperature right to allow a moderate cooling and a gradual rising of the cream, I get all the butter there is in the milk, which is the best any plan can do. A. B. C.

Chemung Co., N. Y.

Dangerous Cattle Disease in Massachusetts.

An infectious, and in most cases, fatal form of pleuro-pneumonia (inflammation of the lungs), has been for some time prevalent in Massachusetts, near Boston. It first made its appearance among an importation from Holland, which arrived at Boston in May of last year. There were but four cows imported, and all were in an enfeebled state when they arrived. Three of them have since died, while the fourth did not take the disease. The owner of them, Mr. Chenery, of Belmont, not thinking the disease infectious, used no special pains to prevent its spreading among his other stock, which took the disease from time to time, until he has lost 27 head.

Mr. C. sold some calves, which were taken to North Brookfield upon the farm of Mr. L. Stoddard. The disease soon showed itself there, and up to March 20th, Mr. S. had lost 11 head, and had 8 more on the sick list. From these cases the disorder spread among neighboring herds, and extended into one or two adjoining towns. For instance, a pair of working cattle, which had only a slight cough, were put into a barn with other stock, and communicated the disease to them. Some have escaped when apparently exposed to the infection.

In view of the immense loss likely to result from this disease, the Legislature of Mass. has passed an act appointing commissioners to visit those places where it prevails, estimate the value of animals which have been exposed to it, kill and bury them, and cleanse the premises. Such stock are to be paid for out of the public treasury. The act has already gone into effect, and is to continue one year.

Deep Plowing and Good Corn.

To the Editor of the American Agriculturist:

In the Spring of 1859 I bought 80 acres of land for $25 per acre, on which the former owner could not make his living—he never plowed more than three or four inches deep. I will give you the result of deep plowing and well tending fifteen acres of corn:

	Dr.
Breaking up ground 8 days—$1.50 per day	$12 00
Marking out to plant	2 25
Planting, 1 day, 2 men and team	2 25
Seed, 2 bushels, at 75 cents	1 50
Plowing three times, $1.15 per acre	17 25
Replanting, 1 day and 1 bushel of seed	1 50
Gathering 800 bushels corn at 3 cts.	24 00
Feeding 60 bushels to hogs	1 80
Interest $3, taxes $37.50	40 50
Total cost	$103 05
	Cr.
800 bushels corn at 37 cts. per bushel	$296 00
1,900 lbs. pork at $5 per cwt.	95 00—391 00
Leaving as profit	$287 95

So much for the *Agriculturist's* teachings on deep plowing and worn out farms. It will be seen by the above figures that corn can be raised very cheap in Illinois—about 10 cents per bushel.

SUCKER.

Hancock Co., Ill.

Potatoes with Sea Weed and "American Guano."

To the Editor of the American Agriculturist:

Having seen it stated that sea weed would prevent potatoes from rotting when placed in the hill, I resolved to try the experiment. The soil was loam inclined to clay, with a hard pan subsoil. The ground was plowed flat with no manure, and marked out two feet nine inches each way. Each row contained 40 hills. I also tried experiments with American Guano at the same time. The guano was mixed with about its own bulk of Plaster of Paris, and applied in the hill. Rows No. 1 and 2 received guano at the rate of about 250 lbs. to the acre. Nos. 3 and 4 nothing. Nos. 5, 6, 7, 8, first guano, then a large handful of sea weed dropped on it, and then the potato on that. Nos. 9, 10, 11, 12, with American Guano, the same as Nos. 1 and 2. Nos. 13 and 14, received sea weed but no guano. Nos. 15 and 16 had the guano under the potato and sea weed on the potato. I planted the Mercer variety and they rotted very badly. At digging time I could see no difference between any of the rows.

Fairfield Co., Conn. D. H. SHERWOOD.

Orchard Grass.

This species, sometimes called rough cocksfoot, and known botanically as *Dactylis glomerata*, is by many considered a very valuable grass, but has not become as popular among cultivators as Timothy.

It has in its favor its rapidity of growth, ability to endure drouth, large yield of fodder, and permanence; to which may be added that it bears shade well and is thus adapted for orchards, its name being derived from this characteristic. On the other hand it is coarser and more harsh than Timothy, is less nourishing, and is apt to grow in tussocks or clumps instead of covering the ground evenly. Conflicting accounts are given of the relish with which it is eaten by stock, some declaring that sheep, especially, prefer it to all other sorts; others say that it is neglected when other kinds are at hand. All agree that it should be kept cropped short. When intended for mowing it is advisable to sow it with clover. It blossoms at about the same time with red clover, and is thus fit to cut before becoming too rank. One bushel of seed to the acre with clover, or two bushels when alone, is the quantity usually sown. It may be put in during September, or sown with Spring grain. A very light bushing to cover it, is sufficient, experiment having proved that the greatest number of seeds germinate at a depth of from one fourth of an inch to no covering at all, but merely lying on the surface. It is well known that the quality of grass depends much upon the location, character and management of soils, etc., and to this fact undoubtedly is due the difference of opinion respecting its value. Experiment has shown that in many sections it is inferior to Timothy particularly for meadow, still, under other circumstances, it may be preferable.

That Dwarf Broom Corn.

In our last, page 104, we referred to a Dwarf Broom Corn, of which we have specimens from Mr. Good, of Pennsylvania. Before us is a letter from a subscriber, L. J. T., of Lambertville, N. J., in which he states that it has been grown to some extent in that region, and he does not appear to esteem it very highly. His description of its form and growth corresponds to that of Mr. Good. He says "it grows short and stocky; the brush stalk is enclosed in the leaf sheath, which also covers about half of the brush and prevents its bending down, and therefore no bending down of the heads is required. The brush is finer and longer than the common kind." He objects to it, that it is nearly all the way of a thickness and renders the broom too limber. We are not certain that this is a defect. The most serious objection offered by Mr. T., is the difficulty of harvesting and cleaning the brush. He says: "The stalk is close jointed, the space between the joints being about six inches, and the leaf springing from each joint extends over and covers the next, making it difficult to see where to cut off the brush stem. The cutting must be made near the upper joint, to preserve length enough, and if the cutting chance to be below the joint, it is troublesome and wearing to the fingers

to strip off the upper leaf that partly surrounds the brush." Further trial may show these objections to be valid, but the dwarf character of the plant, and its long, fine, even brush are so much in its favor, that we still think it may, on the whole, be found superior to the old variety.

Blinks from a Lantern.....XIX.

BY DIOGENES REDIVIVUS.

FARMERS IN THE TWENTIETH CENTURY.

Not having had very marked success in my late explorations I purpose to vary my method a little, and look into the future history of your planet for a farmer. It is possible that that character may now exist, in some out of the way place, and that we may yet fall upon him in our travels. But for the present, let us look in upon the grandsons of the generation now upon the stage. The mirror that I hold up before you, contains no opticial illusions. The pictures are things.

It is a May morning in 1910, and we are looking out upon a New England landscape. I see you hardly recognize the country, it has undergone such a change. You are astonished at the increase of woodland, and at the different location of forests. When the country was first settled, the high lands were cleared, and the dwellings were put upon the hills. Of course, the roads had to go winding up the steep ascents, and the clearings were made from the top downward, until nearly all the high lands were stript of their forests. This policy was, perhaps, a necessity, from the fact that these locations were less liable to chills and fever, a disease that afflicts all new clearings in the woods. It was certainly in violation of all taste and utility that a country should be thus settled. The forests and most rocky lands are found upon these ridges, and this is the most fitting place for forests, both for beauty and for usefulness. They then break the violence of prevailing winds, distribute the showers more equally, and crown the mountains with a glory peculiarly their own. But, see, time has changed these mistakes of the fathers. The roads now wind along the hill side, and through the valleys, and every neat white cottage and farm house has its back ground of meadow, orchard and woodland. The swamps, swales and marshes, that once only bred mosses, brakes, sour grasses and reptiles, now present one broad expanse of meadow, the most profitable lands upon the farm.

Another striking change in the landscape is the disappearance of the stone walls, and the zigzag fences that used to enclose every two or three acres of land. "Pray, what has become of them?" They have literally gone under, submerged by a higher civilization. You miss them at the road side in many places; for the highway has become purely a matter of public convenience, and the man who should attempt to turn it to private advantage by pasturing, would be booked out of good society. The lands you see are only inclosed for the advantage of the owner, and not to guard against the tresspass of the public. Some farms have only a few inclosures near the house, and all the rest of the land is free from obstruction. "But what has become of the stones?" Look down there at the foot of the hill, and you will see breaking out every few rods a vigorous stream of water, and running off into the brook. More than half of the land is threaded with these hidden drains, and the stone walls you miss, have gone down to guard the water ducts, instead of guarding the crops against cattle.

"But, look here, O! Diogenes, what is that strange apparatus upon the meadow, that seems to be a cross between a locomotive and a big yellow dog, throwing out the dirt behind it in a shower? Have the people done with plowing?" The plow is an exploded idea, belonging to rude husbandry. The machine you see, is the patent sod rasper, driven by a caloric engine, doing up the work of the plow, the harrow, and the bush, at one operation, and leaving a seed bed over a foot deep, of a finely comminuted mass of soil. At an expense of five dollars a day for coals and attendance, it rasps up eight acres of meadow, preparing it for planting better than was ever deemed possible in the last century. The drill is hitched on to the engine, when the rasping is done, and twice the quantity of ground is planted that can be rasped in a day.

"But what does it mean that so much more of the land seems to be under cultivation?" You will notice, if you look on a map, that the cities are much larger, and the villages are very much more numerous than formerly. The population is quadrupled, and this fact has increased the breadth of land under tillage, though the product of every acre is more than doubled. The consumption of the products of the farm too, is greatly increased by the ability of the people to consume all they desire. If you could look into the larders in the villages, you would find them all well stocked. The almshouses are still left, but they have few tenants, except in the large cities where too many emigrants remain.

A little later in the season, you will see this same engine hitched to the reaper and mower, and doing about twice the work that was accomplished by a span of horses in the last century. The farmer only cuts grain and grass in the few days when they are in the best condition for harvest. He has these operations completely under his control, and nothing is lost from an unseasonable harvest.

"As so much labor is done by machinery, what do men find to employ themselves about?" Much more time is spent in intellectual culture than formerly. The course of study in the schools is greatly enlarged, and the farmers' sons are not confined to the rudiments of education, and sent out to seek their fortunes at the age of sixteen. Husbandry is no longer a rude struggle of muscles with the reluctant soil. Mind rules every thing in the shop of the artisan, and in the field of the husbandman. The esthetic nature of man has waked to a new life, and the fine arts are patronized to an extent never dreamed of a hundred years ago. Enter any of those farm houses that sit smiling yonder upon the hill side, amid their orchards and flower gardens, and you will find them more sumptuously furnished than the dwellings of the citizen in the last century. The parlor, you see, is a much frequented room. Here are fine carpets, a piano *that goes*, walls hung with engravings and paintings, a center table well furnished with papers and magazines that are read. In the room back there, you will find the farmer's sanctum, dignified with the name of library, the book cases well filled, the writing desk not yet put to rights by the good wife, looking somewhat like an editor's table. Upon my word, here is your old favorite, a venerable Nestor among journals, *American Agriculturist*, May, 1910. May its shadow never grow less.

Nothing so much prevents a person from being natural and easy, as an extreme anxiety to appear so; the self-possessed only are graceful.

Every condition has its own difficulties.

How much Seed per Acre?

This question can be answered only approximately. A table giving a fixed invariable quantity would often mislead for the reasons that quality of soil, method of cultivation, climate and location, all vary the certainty and manner of growth. Where, for any reasor, it is difficult to make seed "take," it may require an addition of as much as twenty five per cent, or one peck to the bushel. Again on very rich land, where grain would tiller exuberantly, it is the practice to diminish the amount sown. With crops like roots, onions, etc., where thinning is practicable, it is advisable to sow liberally enough to allow for this. Individual judgment must be exercised. The following table republished from Vol. XIV, in answer to a call from many subscribers, shows the smaller and larger quantities usually allowed to the acre.

Barley, broadcast, 1½ to 2½ bushels; in drills, ¾ to 1½ bushels. Beans, 2 to 3 bushels. Beets, 3 to 5 lbs. Buckwheat, 1 to 1½ bushels. Carrots, 2 to 2½ lbs. Corn (Indian), ½ to 1½ bushels; Broom Corn, ¾ to 1½ bushels. Flax, for seed, ½ to 1 bushel; for fiber, 1½ to 2½ bushels. Grasses—Red Clover, 10 to 16 lbs.; White Clover, 4 to 8 lbs.; Blue grass (Kentucky), 10 to 16 lbs.; Red Top, 12 to 18 quarts; Orchard grass, 20 to 30 lbs.; Timothy (Herds grass), 12 to 18 qts. Hemp, for seed, ¾ to 1 bush.; for fiber, 1 to 1½ bush. Millet, 1 to 1½ bush. Mustard, 10 to 20 qts. Oats, 2 to 4 bush. Onions, 4 to 5 lbs. Parsneps, 3 to 6 lbs. Peas, in drills, 1½ to 1¾ bush.; broadcast, 2 to 3½ bush., according to the size of seed. Peanuts, in hills or drills, 1 to 2 bush. Rye, in drills, ¾ to 1 bush.; broadcast, 1 to 2 bush. Turnips, 1½ to 2½ lbs. Wheat, in drills, ¾ to 1½ bush.; broadcast, 1½ to 2½ bushels.

For the American Agriculturist.

Liquid Manure for the Garden.

Every man who has a sink spout, has a fountain of wealth at his back door. You laugh at the idea, for you have never tried it. Make the experiment, and you will laugh at your own simplicity for overlooking a stream that abounds with gold dust, as really as Pactolus. The application of liquid manure to meadows, on farms may be at some distance in the future, but for its use in gardens the time has already come. A good many laborers, mechanics and villagers are already trying it, and finding it just the thing.

If you have nothing better, sink a half hogshead a foot or two in your garden, in the most convenient place, and run a leader from your sink spout into it. A watering pot is the best thing to put it on with, but not at all essential. An old pail and dipper, kept for the purpose, will answer. When the plants are well up, and begin to grow nicely, apply the liquid two or three times a week, just at night. It is excellent for vegetables and the small fruits, and for grapes and pears, until they begin to approach maturity. It not only increases their size, but improves their flavor.

GARDENER.

Remarks.—In Vol. XVI, p. 157, we gave a full description of our own method, and of the great benefit derived from the use of sink slops, wash water, etc. In a corner of the garden we sunk a large hogshead even with the surface, and built a square box over it with a hinged lid to raise up for dipping out the liquid with a paint tub. On our present place we shall save all such material in a stone manure tank, partly under the stables, and partly in the yard, to be used as needed.—ED.

Every man is the architect of his own fortune.

Microscopic Views of the Insect World.—III.

BY MRS. CHARLOTTE TAYLOR.

THE LADY-BIRD—*Coccinella Platicentra.*

Let me now introduce to you one of your greatest friends. Examine her well, so that she may henceforth be known as such, and not classed among your enemies, which I am sorry to say is often the case. What the dog is to man among quadrupeds, faithful and honest, this little lady-bird is among insects—ever near his dwelling, always at work in his service. She brings the first news of the advent of Spring, and is one of the last to leave us when dreary Winter wraps us in his mantle of snow.

Fig. 1—*a*, Coccinella Platicentra, (Lady Bird.) *f*, point of the wings.

She belongs to the second family of Latreille's Coleoptera Trimera; so called from having only three ordinary joints in the tarse or foot, (*b*, fig. 2); the body is convex, and nearly hemispherical; antennæ, eleven jointed, rather short, clavate or terminating in a mass like a reversed conical club, (*c*, fig. 3); mandibles (jaws) acute; thorax short. The under-wings, (*e*, fig. 5), are very much *smoked*, as entomologists say, by which is meant they have the appearance of having undergone this operation. It is marvelous how they are folded up in such a small compass; the points pass over each other as you perceive, (*f*, fig. 1), and under the opposite wing case, and when expanded, are nearly double the length of her body, (*g*, fig. 7). It is necessary they should be so, as she is so solid. There are a number of varieties; we count more than a hundred in this country. Some are very prettily colored, bright red, yellow, and white, with black spots, and sometimes black with these spots reversed. She and her larvæ (or children) feed on the Aphides or plant lice alone; so you may perceive how precious they should be to us. You will find her eggs deposited on the same leaf where those of the Aphis are placed. The circle of her bright yellow, flat and oval eggs surrounds those of the plant louse, (*h*, fig. 6). They hatch nearly at the same time, and if you can not imagine what a number of wolves might be in a flock of sheep, place a magnifier over a leaf on which these insects are found, and you will see carnage and havoc beyond my describing. It is at this stage, (*i*, fig. 8), that they are most active, and destructive to the lice. It seems impossible for them to have a surfeit; their appetite is insatiable. But after changing their skins several times, even they must rest for awhile. The larva glues itself by the tail to a stem of the plant it is on, and gradually contracts itself into a pupa. In a day, or more, according to the weather, the skin splits, and an ugly, deformed, broken backed pupa may be seen still secured to the old skin, (*j*, fig. 9). It has all the rudiments now of the mature Lady-Bird—wings, and legs—but can not move or take nourishment. In a few days more, this skin bursts, and the perfect Imago (winged insect) makes its appearance, soft and moist, and very black, but as the air dries her, her wings and bright colors come out vividly, and she appears the pretty little gem with which Nature adorns herself. Her food is the same, she has the same propensities, but is rather lazy. She does not hunt so eagerly, but places herself in the midst of plenty, and enjoys it. You perceive her mandibles (*d*, Fig. 4), are well fitted for her vocation. They act like wedges, and the crushing of these soft little bodies is soon accomplished. When her prey is exhausted, she moves leisurely away to another nursery of her pulpy victims. She will live two seasons feeding thus, hybernating in some secure corner during the Winter. Now is she not a beneficent little Lady-Bird—and yet through ignorance, thousands are murdered every season. I have here illustrated rather an uncommon variety, (*a*, fig. 1,) and have named it from the plants whose aphides it feeds on. The elytra or outside wings are of a bright orange color, with the spots black. It came from the pupa case early in May last, was placed under a glass, and fed with the Aphides from the plant Cuphea Platicentra, and lived happily in company with a small black and brown spider, the Epeira Aphites whose food is likewise plant lice. It was a curiosity to many persons to see the affability and apparent friendship existing between two insects, which one would suppose so very uncongenial. They would feed at the same time from the same leaf; they could often be seen reposing side by side, and the harmony and understanding between them was most complete. Last October, returning from a walk, I brought with me a fine specimen of Spring beetle, the Elater Oculatus; being in haste, I placed it, for the time, under the same glass with the friends. I had quite forgotten the circumstance, and at near bed time I went as usual to see how my large family was thriving, when lo! the poor Lady-Bird was swinging at the top of the glass, and her friend winding her up higher and higher. They had not been very plentifully supplied that day, and I came to the sorrowful conclusion, Nature was inexorable, and that here was the end of this charming episode. I am ashamed to say how grieved I was at such an exhibition, although it was only what might have been expected. I hastened to remove the Elater, leaving the supposed murderess to finish her repast at her leisure. But next morning, the friends were as well as ever at the bottom of the glass, waiting for their breakfast, and no doubt quite jolly over the fright of the previous night.

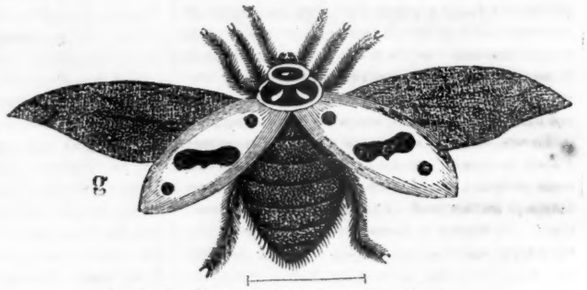


Fig. 7—Coccinella (Lady-bird) in the act of flying.

Fig. 2—Leg and foot, magnified. Fig. 3—Antennæ magnified.

Fig. 4—Mandibles, magnified.

Fig. 5—Under wing, magnified.

Fig. 6—Leaf with eggs.

What do you say to this? Is it reason or instinct? I see in my vocation so many such exhibitions, I fear to give latitude to my convictions, therefore you must draw your own conclusions. The spider evidently felt, or thought, her friend was in danger, and so lent her aid to raise her out of reach of the beetle, and each time a larger insect was placed with them, you would soon find the Lady-Bird at the top of the glass. But let me tell you the end of all this. In January, the Aphides were all exhausted on my plants, and I went up to the hot-house of a friend, where I found a full supply upon a plant belonging to the Hibiscus family. I returned, happy at my success, and placed a leaf covered with these dainties before my little pet, and next morning found her *dead*. Mark this beautiful provision of Nature. I had tested it often, and yet at the moment it had quite escaped my memory. The Coccinellidæ can be fed upon any variety of Aphides, provided the eggs are hatched together on the same plant, but take the larvæ or perfect insects, and feed them on Aphides from another plant, even if it is the same species, they will die immediately, a convincing proof how thoroughly the Aphides imbibe the very essence of the plants they feed on at the time. The eggs from which she and others had been hatched, although laid on a rose leaf, when emerging, found themselves on the Cuphea Platicentra, and the change to food from another plant killed my pet. The spider never descended for food after this; she spun around herself an irregular loose web, and three days after I found her dead, but from what cause, I can not say, as I never have as yet tried this experiment upon any of the spiders which feed alone on plant lice. This is the reason they are found em-

Fig. 8—Larva eating an Aphis.

Fig. 9—The Pupa Case, magnified—*k*, natural size.

igrating in flocks from field to field in search of the food they had fed on in the larvæ state. If it is upon the hop, they will leave the rose and seek it, and they will shun the rose and seek any other on which they had fed when larvæ. They are not found emigrating so much in this country as in Europe—food is too plenty as yet. I once met a flock in North Carolina. There had occurred some accident to the previous train, and we were detained on the road. I spent two hours assisting at this flitting of some hundreds across the road from one field to another. The one they had left was green and flourishing from their presence—the other required it sadly, falling rapidly into the sere and yellow leaf. I was happy to have secured the last little emigrant before I resumed my travels.

Towards Winter you will find them clustering together, hibernating in old palings, old posts, and under the eaves of green-houses. What a treasure they might be to the florist, if caught in Summer, and fed regularly until the conservatories and hot-houses are closed for the season, then their liberty being given to them, they will keep the Aphides subdued if not entirely exterminated.

There is a positive remedy always at hand; the good is placed in juxtaposition with the evil, by the Creator, and it is the part of wisdom to discover and apply the help so provided. May I hope that henceforth you will estimate this valuable little creature more highly than before, understanding that her mission, most faithfully performed, is to "Cleanse the *foul* surface of the *infected* leaf."

For the American Agriculturist.

How to Conquer the Red Spider. (*Acarus Telarius.*)

Mr. Editor: Your correspondent "Enquirer's," account of his long and fruitless battles with this pest of the green-house, entitles him to sympathy and assistance. However strange it may seem that the fumigations, syringings, and resentful poking of sticks at the intruder have failed to dislodge him permanently, it is not surprising when we learn that he is enveloped by a water-tight jacket, a perfect life-preserver on which such treatment has as little effect, as the rain upon a sailor's tarpaulin. We can fancy the insect laughing in his sleeve, as he lay snugly ensconced, while "Enquirer" was pouring out his indignation. Permit me to introduce to him an ally, who, though unprepossing in appearance, will do him good service. The Shepard Mite Spider (*Phalangioide acarinia,*) better known to most persons as "Daddy Long Legs," is the natural enemy of the "Red Spider," not from any hatred, for he loves him well enough to eat him up, which he does whenever he can find him. Almost every child knows this insect with his little body, and long, stilt-like legs, with which children direct him to "tell which way the cows are." He is a singular creature, with eyes on his back, enabling him easily to discover his prey on the under side of a leaf above him, and having long, slim mandibles (jaws), he sizes his prey as handily and as firmly, as a dentist would take a tooth with his forceps, and with just as little mercy. If during the Summer a supply of these be obtained and domesticated upon the infested plants, they will wage a warfare to some purpose, to the great delight of the plants and their owner. They may be found early in Spring under the eaves of hot-houses, and near old caterpillar nests, where they hibernate. They may be shy at first, but are easily tamed by kind treatment, which they will well repay. Amicus.

For the American Agriculturist.

Death on Lice.

It is not always poor cattle that become inhabited with these parasites. Fat cattle, owing to foul stalls or some other cause, are occasionally caught with the pests. Some apply *Unguentum* or Mercurial ointment, which, to be sure is death on the lice, but also, not unfrequently, death on the cattle. It is an active poison when taken into the stomachs of cattle, as it is sure to be, if put within reach of their tongues. It should never be used. Others resort to tobacco, a safe remedy, but still injurious oftentimes to the animal. The only effectual remedy, that is at the same time safe, which we have ever tried is oil, or grease. These parasites lay their nits upon the hair, and it is only when the hair is dry, that they can make the eggs adhere. If the hair be kept well lubricated for a few days with sweet oil, or any kind of grease that will not become sticky, the insects will decamp for dryer quarters. They attempt to climb the greased poles and give up in despair. Armed with an oil bottle you may effectually rout the enemy, without risking the health of your cattle. Connecticut.

Sulphur for Sheep Ticks.

Wm. P. Chase, writes to the *Agriculturist*: "In the Jan. No., p. 27, I notice a doubt as to the efficacy of sulphur to expel ticks from sheep. I have no doubt. I *know* it will do the thing much more efficaciously, and with much less injury to the sheep than the nauseous mode I have practiced of dipping them in a decoction of tobacco, cicuta, etc. Since 1844 I have used no other preventive to keep ticks from sheep, or lice from cattle. My mode of feeding is to have boxes about 1 by 1½ feet square, with sides about 3 inches high; mix as much flowers of sulphur with salt as can be made to stick to it, and put in the boxes, for sheep or cattle. Feed it any time, but particularly in warm weather. Since 1844 I have seldom found half a dozen ticks to the hundred sheep at shearing time, and some seasons none.

I *think* feeding sulphur a great help in keeping clear of the foot-rot. My sheep have neither ticks nor foot-rot, although there is much of it near, and around me.

What Shall be Done with the Dogs?....I.

DOG LAWS OF RHODE ISLAND.

Not long since, a large farmer in our own town, one of our most worthy citizens, was bitten by a dog, and died a distressing death by hydrophobia. We never pass his house or remember his lonely widow and orphan children, or think of his loss to the country, without instinctively estimating how much greater the value of that one life, than of all the dogs in the land. We grant that sometimes a life has been saved by a dog, but such instances are so rare, when compared with the deaths by hydrophobia, that they are not worth taking into account. And of what utility are nineteen out of every twenty dogs in this country? It costs nearly as much to keep a dog as a hog. What an addition to the wealth of the country, if five millions of dogs were replaced by as many hogs. But these general considerations aside, we now refer more particularly to the loss to our productive industry by sheep-killing dogs. We have published many articles showing conclusively that raising sheep is one of the most profitable departments of husbandry. But from every part of the land come back responses like these:

"What's the use of all your facts and logic? We can not keep sheep, unless we provide a shepherd to watch over them night and day. What's the use of expending hundreds of dollars to gather a flock of improved sheep, when, in a single night, you may lose twenty per cent of them by some marauding dog, whose owner can not be found, or if found, ten to one he is irresponsible—his chief property, perhaps, being the miserable cur that did the damage."

We say such responses come from all parts of the country. Who has not, in his own observation, proof that these complaints are well founded. We can point to a single town, within 50 miles of this city, where sheep raising was commenced a few years ago on a large scale, and with great profit. But now, not one farmer in twenty five keeps a single sheep; and the *only* reason for giving up sheep raising was the frequent ravages of dogs.

We purpose to devote some space to this subject, and will be thankful for any information that will throw light upon it. If farmers fully appreciated the actual condition of things—if statistics could be gathered of the loss suffered by dogs during the last dozen years alone, and the public were aware of the fact that the number of sheep in our country could be doubled during the next dozen years, were there perfect security against dogs, we have no doubt there would be such a general excitement that our State Legislatures would be compelled to pass the most stringent laws that could possibly be enforced.

Perhaps it may be well to give the laws recently enacted by three or four States. A correspondent has recently favored us with a copy of the laws just passed in Rhode Island, which go into effect the first day of this month (May). The law is good so far as it goes, but is not half stringent enough. [Will some one oblige us with a copy of the present laws of Massachusetts, Maine, etc., on the subject.]

STATE LAWS.

State of Rhode Island and Providence Plantations. In General Assembly, January session, A. D. 1860.

AN ACT in amendment of chapter 82, title xiv, of the Revised Statutes, "Of Dogs."

It is enacted by the General Assembly as follows:

Section 1. Every owner or keeper of a dog shall cause such dog to wear around its neck a collar with the owner's or keeper's name, or the initials thereof, distinctly marked thereon; and any person may kill, or cause to be killed, anywhere out of the enclosure of its owner or keeper, any dog not so collared.

Section 2. Every person keeping or harboring in his house, or on his lands, any dog, or knowingly suffering the same to be done by any other person, shall be liable for all damages done by such dog, in the same manner as if he were the owner thereof.

Section 3. Any person may kill any dog that may suddenly assault him, or any person of his family or in his company, while anywhere peaceably out of the enclosure of the owner or keeper of such dog; and any person may kill any dog that may be found, out of the enclosure of its owner or keeper, worrying, wounding, or killing any neat cattle, sheep, or lamb, not the property of its owner.

Section 4. If any person, or any member of such person's family, shall be assaulted by any dog, out of the enclosure of its owner or keeper, or if any person shall have reason to believe that such dog will, out of such enclosure, probably do any injury to his person, family, or property, and shall make complaint, under oath, thereof to any justice of the peace in the county, such justice shall give notice, by warrant or summons, of such complaint to the owner or keeper of such dog; and if, on examination, the justice shall believe that such assault is proved, or that the complainant has reasonable ground for his fears, he shall so adjudge and shall give written notice thereof to the owner or keeper, and such owner or keeper, shall forthwith confine or kill said dog; and if he neglect to kill him or keep him confined, he shall forfeit the sum of ten dollars, to be recovered to the use of the town, before any justice of the peace or court of magistrates, and any person may kill said dog. And if after such notice, such dog shall wound or injure any person, or shall, elsewhere than on its owner's or keeper's premises, worry, wound, or kill any neat cattle, sheep, or lamb, or do any other mischief, the owner or keeper shall be liable to pay to the person injured treble damages therefor, with costs. And in all cases of the complaints under this section, recognizance shall be given for costs, and the fees and costs shall be the same as in other cases of complaints before justices of the peace.

Section 5. Every owner or keeper of a dog shall cause a particular description of such dog, embracing all the natural and artificial or accidental marks of such dog, to be registered in the town clerk's office of the town where he resides, in a book to be specially kept for that purpose,

and shall pay to the town clerk ten cents for his fee for every such registry; and any person may kill, or cause to be killed, any dog going at large not so registered; and whenever the description or marks of any dog are substantially changed, he shall be registered anew.

Section 6. Nothing in this act shall be so construed as to repeal any ordinances concerning dogs, not inconsistent with the provisions hereof, which have heretofore been passed by the town councils of several towns, or the city councils of any cities.

Section 7. The town of New Shoreham, shall be exempted from the provisions of sections 1, 2, and 5 of this act.

Section 8. This act shall take effect from and after the 1st day of May, A. D., 1860.

A true copy—witness: JOHN R. BARTLETT, Secretary of State.

For the American Agriculturist.

Horses need Air and Light.

If anything can be done to add to the comfort and health of the horse, no animal deserves more to have such an effort made. Our stables should be constructed with special reference to his comfort and health, and to these all other accessories must yield.

Our fathers' and grandfathers' barns were of the wide, old fashioned sort, with all manner of loop holes and air holes—between the vertical boarding you could put your whole hand. They were originally tight, but when well seasoned, there was light without windows, and the pure air circulated freely: here was perfect ventilation, and yet talk with those same men about the necessity of ventilating a stable, and they are ready to prove that they have kept horses all their lives, who did well, worked well, were always in fine health and spirits, and that a ventilator is only a fancy idea—one of the new-fangled notions of the present generation.

Our stables have been improved in architectural beauty, and in more permanent form of construction; they are pleasing to the eye, tight, proof against the wind and weather, and with solid walls of brick and stone, all of which the poor horse would gladly exchange for the pure, fresh air, of which he is now deprived.

In providing for the necessities of a horse, it would be well to ask ourselves, how we should like to be placed in the same situation. If it is healthy for a man to live day and night in a close, damp cellar or underground apartment, then it is healthy for a horse. If it is healthy for a man to live on the lower floor, in an unventilated apartment, with a manure and root cellar beneath him, whose pestiferous miasmas are penetrating every crack, mingling with the foul air he breathes, and rising still higher, permeating the food he consumes, then it is healthy for a horse. But why argue against barn cellars and ill ventilated apartments!—the proof is abundant to all who want it, and he that can not be convinced, must cease to wonder why his horses have diseases of the skin, the lungs, the eye, etc., or the glanders, the grease, the scratches, and other diseases that are directly traceable to the impure atmosphere, in which he compels them to stand and breathe.

We would, therefore, in the construction of a stable, endeavor to provide against these evils. Build root cellars and other cellars entirely distinct from the barn—at least not directly under the horse stalls; let there be a free circulation of air under the floor, and particularly so throughout the stable apartments. Ventilate the horse stable through the roof, and entirely independent of the other portions of the barn; let the connection between the horse stable and the hay mow be closed tight, except when hay is being delivered. Ventilate the carriage house through the hay mow and roof.

Let your horses' heads be towards the side or end of the barn, and provide the head of each stall with a fair sized window: a horse wants, under all circumstances, whether tired, sick, or well, plenty of light. When there is light and plenty of fresh air, it is a common practice to turn the stalls the other way, and keep the horse somewhat in the dark. A good horseman knows that a horse enjoys light and air as much as he does himself, and he will thrive better in the coldest Winter on the lee side of a hay stack, than he will in a badly ventilated barn, however comfortable it may be otherwise. It is stated that, if the gases exhaled from a horse's body were confined around him by a gas-tight bag, they would cause his death in twenty-four hours, allowing him at the same time to have his head out and to breathe pure air.

If you want satin-skinned horses, in fine health and spirits, ready at all times to work or to drive, a thorough system of ventilation will be one very important step towards it.

A manure shed should be built outside the stable, and sufficient only to afford protection from wind and rain, with a door connecting with the barn, and running to floor of stable, which should only be open when the stable is being cleaned. The exhalations of the manure heap are then not permitted to return to the stable—nor should any of the gases generated in the stable, be allowed to pass into the carriage room or hay mow.

As a matter of economy, it is just as cheap to build a stable calculated to give a horse the greatest amount of comfort, as to build it in any other way. Cellars are handy arrangements, and in the first cost it may be cheaper to put them under the barn, but a few years' experience will show the heaviest balance on the debit side.

New-York, April, 1860. GEO. E. WOODWARD.

Cranberry Culture....II.

PLANTING VINES.—The proper time for planting is in the Fall, in October and November; or in the Spring, from the opening until the last of May. The plants may also be removed in August, with great care, but this time is not recommended. Whatever time is chosen, all cultivators agree that the plants should be removed immediately from their native bog, or the yards where they have grown, to the new plantation. The keeping of plants in damp warm cellars as some recommend, weakens their vitality. The purchaser should always stipulate for fresh plants.

If the cultivator have prepared his ground for flowing, the plants may as well be put out in the Fall. They will get well established, and be more likely to bear some fruit the first season. This is the more common practice upon Cape Cod, in the yards that are flowed. But if this advantage is not possessed, the Spring months should be chosen. The danger of Winter killing, which is very great upon all wet soils, will be avoided.

If upland is selected for a plantation, the Bell variety is best. This is said to grow in its native locality upon the edges of swamps, in clays, and wet gravels and sands. It is successfully grown by several cultivators in Massachusetts, upon soils dry enough for potatoes, and as their experience extends over the last six or eight years, and they have had tolerable success, there can be no doubt that with this variety, upland cultivation is practicable if not profitable.

Sod planting was the earliest method adopted for multiplying the plants, and is still followed. As this removes a portion of congenial soil with the roots firmly imbedded in it, it is the safest, and gives the new plantation the best start. The only objection to it is, the greater expense in stocking a new yard, and the trouble from the wild grasses taken up with the vines. These grasses are best kept under, by covering them with sand and gravel. After the vines get the start, they will smother the grass, and take care of themselves. Another method is to divide up the sod, and separate each vine from the grass, and plant them in hills of a half dozen or more. This involves more labor in the planting, but has the advantage of killing the grass at the outset.

Cutting planting is pursued by other cultivators, and is an economical mode of stocking a new yard. The vines are cut up into pieces five or six inches long, and the middle of each piece is inserted in the soil, and the two ends are left to grow. As the vine is very tenacious of life, it readily takes root and spreads. Sometimes the slips are cut shorter, and one end is planted with a dibble. Both these are popular methods, where there is a small stock of vines. The distance at which vines are planted, differs somewhat according to the circumstances of cultivators. The distance preferred on Cape Cod, is eighteen inches, but they are frequently planted three and four feet apart. As a rule, the nearer they are planted, the sooner they will form a complete mat over the ground, and yield a full crop.

Broadcast planting is adopted where the surface is completely cleared of bogs and roots, and the soil made of very fine tilth, and where the vines are plenty. They are run through a common hay cutter, making slips an inch or two long. These slips are either sown broadcast and harrowed in, or are planted in drills. These cuttings take root from the base of the leaves, and will soon present the appearance of young healthy vines.

Planting the seed.—This mode of propagation has been frequently tried, but not with very encouraging success. The fruit is taken after it is decayed, or mashed for the purpose, and is sown either in drills or broadcast, and barely covered with the soil. The young plants are feeble, and of slow growth compared with the cuttings, and are much more liable to be overcome with the grasses and weeds. Those who have had most experience in the business, do not recommend the sowing of the seed.

TREATMENT OF YOUNG VINES.—Though the cranberry does not require that amount of cultivation which many other varieties of fruit need, it is greatly benefited by tillage for the first two or three years. This is especially the case with the variety grown upon upland. Those who weed and hoe their vines, find that they grow much faster, and come sooner into bearing. The stirring of the surface of the soil, makes it more porous and accessible to the moisture of the atmosphere. It is true that plants often succeed when planted in the midst of swamp grasses, and overpower all rivals. But it is only after a long struggle. The office of the cultivator should be, to aid in this struggle, and to bring the plantation in the shortest time to the point where it will be profitable.

ENEMIES.—The cranberry, like most other fruits, has its enemies and drawbacks, and from the great fluctuation in the price, ranging from a dollar and a half a bushel, in years of plenty, to six dollars in years of scarcity, we may safely judge that it has its full share. The vine worm, one of the most fatal of these enemies, is about an eighth of an inch long, and carries on its work of destruction so furtively, that it is seldom seen until the attention is attracted by the dying vines. It begins its attacks at the base of the present

years growth, and works upward, feeding upon the juices of the vine, and leaving a web behind it where it has finished its destruction. The vines have the appearance of the "fire blight." It comes soon after blossoming, and seems to visit the yard in patches, wholly destroying some spots and leaving others untouched.

The cranberry worm is very similar to the apple worm, and by some is thought to be identical. It attacks the fruit in the same way. Flooding is often resorted to, to prevent this, but with only partial success. No effectual remedy has as yet been discovered.

The rot also sometimes makes its appearance, but is much less troublesome than the insects. It is most likely to affect those spots which are lowest in the yard, where the water is stagnant. This is probably the cause of the disease, and the remedy is easy of application. The yards that are kept flowed in Winter, and surface drained in Summer, are most free from all these enemies.

COMPARATIVE PROFITS OF THE UPLAND AND SWAMP CULTURE.—While it is conceded that this fruit will grow upon upland, and that good crops can be obtained, especially with the Bell variety, it is only at the expense of much labor and nursing. The plant is not entirely at home there. Its native place is in the lowlands and swamps where water and peat are abundant. The great crops are raised upon these lands, and at very little expense for cultivation after the plants are established. It is only in cases where lowlands are not to be had, and in the way of garden cultivation for family use, that we can advise the planting of cranberries upon upland. We know that persons who have had tolerable success in the dry cultivation, and have plants to sell, differ from us in this opinion. Our convictions are the result of impartial observation, and will pass for what they are worth. As advised at present, we can only counsel our readers to make plantations on any large scale, upon the soils where the fruit grows naturally. On swamp lands, especially if they can be flowed in the Winter, say from November to April, they may reasonably expect success, and a generous reward for their labor. The demand for the fruit is already far beyond the supply, and is likely to keep ahead of it, for the next twenty years. If the price should fall a little, it would still be a good business. We have no particular solicitude for Fungus and his household, but for the sake of Merriweather the carpenter, and Jones the farmer, we should like to see cranberries more abundant in market.

How to stop the Apple Borer.

Some who have adopted the plan of shutting him out, have put on coal tar, or oil, and killed their trees. It is well known that this insect makes his attacks just at the surface of the ground, and if this part can be guarded in any way, the tree is preserved. The following plan is adopted by some fruit growers with great success. A piece of six-penny cotton cloth, about a foot in length, is wrapped around the body of the tree, extending a few inches above and below the surface of the ground, and fastened either by sowing or tying. The insect, finding this check to her operations, goes to unprotected trees to deposit her eggs. The cost is not over a cent for a tree for the cloth, and if this is too expensive, thick brown paper will answer as good a purpose for a single season; even newspapers will answer. This remedy is perfectly safe, and if effectual, it will remove one of the most formidable obstacles in the way of growing apples, quinces, and peaches. The latter part of May is a proper time to put on the wrappers. Some growers effectually protect both apple and peach trees, by banking them up with earth the last of May, and removing it in September. The insect is thus shut out from the tender bark around the collar of the tree, where it usually deposits its eggs.

Visit to the Kew Gardens....II.

(*Concluded from page* 113.)

"Please to show us some of them plants what lives on hair," says a raw-bred Englishman following in our train. Yes, yes, says the director, but wait awhile.

From this place, we passed on to the Orchid House where we saw many plants "that feed on hair," some of them attached to branches of wood, some in wire baskets, some in the husks of cocoanuts, and suspended from the rafters, living and flourishing, apparently on heat and moisture.

But now, we are tired out, and must sit down and complete our visit by studying the last Report of the Director. He says: "This Garden is especially intended to be the means of introducing new, rare, and useful plants, and dispersing them through our own and other countries, and to give an impulse to nurseries and persons trading in exotic plants. Collectors have been sent out into all parts of the world, to obtain and send home whatever would be of value here. The director also carries on an extensive correspondence with intelligent persons of every country. We have been aided in our work by the public and private services of individuals and companies, in conveying our collections to and from the East and West free of expense." The Report speaks of several new things lately received—such as the Tussack-grass from the Falkland Isles, already proved valuable in Scotland and Ireland; the Chinese grass, useful in making calico; the African Teak-tree, excellent for ship-building; the Huon-pine, from Van Dieman's island, proved to be a hardy and beautiful conifer; a hardy palm, from China; hardy rhododendrons from the Himalaya mountains, etc., etc.

The Report adds: "There is not a respectable nurseryman in the Kingdom, who has not profited by the riches of Kew, and is not willing to make us presents in return." Within four years, there were sent out—

1. To botanical gardens on Continent. 1,132 living plants.
2. " " in England. 1,155 "
3. " Nurserymen and private gardens. 17,616 "
4. Seeds collected and distributed. 4,819 packages.

The number of papers of seeds received from abroad we do not learn. As we have before seen, these Royal gardens are for the public enjoyment and profit. And to show how the public appreciate them, take the following, from the Record of Visitors.

In 1841,	the visitors	numbered	9,174.
In 1850,	"	"	179,627.
In 1854,	"	"	400,000.

The mass of these visitors come undoubtedly for health and recreation; but many for horticultural and botanical study; many for sketching trees and plants, to be worked up into landscapes, or designs for manufactured goods. The annual grant to this establishment from the government, is about $35,000, and it is well bestowed. Visitors are allowed free access, but they have to conform to the rules. For instance, smoking, eating, drinking, or the carrying of provisions for lunches, or packages of any kind inside the gates, is absolutely forbidden. Children without guardians are excluded. No flowers or plants may be touched without permission from the director.

But we have tarried in these famous Gardens a long while, and must now take a hasty leave, filled with admiration for "the powers that be" in England, in furnishing such a rare and vast collection of things useful and beautiful. Well did a discriminating visitor from this country observe: "No thoughtful individual can retire from this place without having had his mind enlarged and elevated: he will rejoice also that by the patronage of a wise government, these wonderful collections have been made, and by its discrimination there is appointed for their care the best man of the century."

We soberly consider a visit to Kew, of itself, worth a voyage across the Atlantic. Shall not our own country soon have a national garden, in fact, as well as in name? So may it be!

Two Curious Evergreens.

1. *The new Weeping Pine.* Horticulturists abroad are much interested in this singular tree. It belongs to the family of our native white pine (*Pinus Strobus*) but has a positively drooping habit. It originated in Europe about seven years ago, coming up accidentally among a lot of seedlings of the white pine. For cemeteries, it is regarded as peculiarly appropriate, and for certain positions in pleasure-grounds. We understand that it has been largely propagated during the past year, and will soon find its way here.

2. *The new Weeping Norway Spruce.* This is a distinct variety or sport of the favorite Norway conifer. Those who have seen it, describe it as being almost as pendulous as the old weeping willow. It originated in Liverpool, among a lot of seedlings, and was sent to Dorchester, Mass., in a package of some three thousand small trees. Its peculiarities did not appear until a year or two after it was planted here.

We have seen a photograph of the tree, and can assure our readers that it is a great curiosity. It is the property of Mr. Wales, near Dorchester, who, for some unexplained reason, has not yet allowed it to be propagated from. Perhaps, he is ambitious to be known as the sole proprietor of a very wonderful tree. We hope no accident may befall it before a duplicate is obtained.

More about that Oregon Tree.

D. D. Prettyman, writing from Multnoma Co., Oregon, speaks of this evergreen tree, or rather shrub, as follows. The "Wonderful tree of Oregon," alluded to in a former number of the *Agriculturist*, is a very pretty evergreen shrub, which bears a small red berry. It is here known as the "Oregon Balm," "Sweet Laurel," "Wax Leaf Canathis," and several other names. The leaf has a bright appearance, is sticky to the touch, and so sweet scented as to fill a large room with its odor when taken into it. I have transplanted a great many of the trees from their native localities, but have not succeeded in making any of them live, nor have I been able to raise them from seed.

Remarks.—We advise another trial with the seeds, putting them in boxes of earth as soon as ripe, and planting in Spring. Also take up a few small plants with a ball of earth about the roots, and set them in a soil made as nearly like the original as possible.

We have received from D. Whitworth, Washington Territory, a description of the tree, corresponding generally to the account given in our last number. Small trees sent by him are also on the way, and we may expect before long to have the claims of this stranger fairly tested.

MAY FLOWERS.

(Engraved for the American Agriculturist.)

"The flowery May, who from her green lap throws
The Yellow cowslip and the pale primrose."—MILTON.

Our picture is a little too leary, perhaps, for this month, in some parts of the North, but for our latitude, and all south of us, it gives the true spirit of the season. The Spring has come with all its joyous associations. The snow squalls are past, the April showers are over, and one may safely venture out for the day, without overcoat and umbrella. You have here, in the foreground a family group beneath two majestic trees standing upon the banks of a stream. You see on the right a little patch of water with aquatic plants at the edge, and the dog who has just come out from a bath, as full of fun and frolic as the merriest biped in the company. The whole party are in motion, and the younger members have on their high heeled shoes. Every face wears the eager air of expectation, even the baby, who stretches up its little hand to the green boughs of the old oak, like older people, reaching after that which is too high for its grasp. They have gathered their spoils, cowslips from the brook, flowers from the hedges, evergreens from the woods, and are bound home or to the village green, where they will meet other family parties and join the frolic around the May pole. You miss the husband and father in the group, and this is one of the excellences of the artist, for he shows his power in a picture quite as much by what he suggests, as by what he portrays. The fact is, the old gentleman has turned boy, and you will find him down the stream a few rods, where it plunges over a rocky bed, casting his fly for trout. A brace of speckled beauties, a foot long or more, are already in his basket, and he confidently expects a dozen from the same rapids. It is of no use to speak to him now, for he has glorious sport, and nothing short of a drowning child would call him off until his basket is filled.

In the back ground you see other parties Maying, the peaceful kine lying in the meadows, the green woods, the spire of the village church, and the distant hill tops, a scene of rural beauty that will make every citizen long to pack his trunk, and start for the country. The reality, we suspect is quite as pleasant as the picture; and this month will find our readers, some of them in the far South enjoying green peas, tomatoes, and new potatoes, but the larger number, reveling in the vision of meadows in their freshest green, in blooming orchards and gardens, in the hum of bees and bird songs, wandering

"Through fields of floral silver and gold,
Catching the apple tree's breath and bloom."

Native Shrubs and Plants.

The gardens and nurseries have already appropriated most of our native plants which are valuable for ornament; yet some may still be found in the woods which are worth transplanting. They will cost only the labor of digging up and resetting. We will mention a few:

The Leather Wood, called Wicopy, (*Dirca palustris.*) This shrub grows from three to six feet high. It is remarkable chiefly for the toughness of its bark. The Indians used it for cordage; millers and wood-cutters use it still for thongs. It has yellow flowers in April, before the leaves appear. The foliage is a fine, glossy green, wood white and brittle. It has the singular property (for a vegetable) of sloughing, i, e., of throwing off its dead wood. In transplanting, it is generally necessary to choose small specimens.

The Azaleas, or wild Honeysuckles. This genus includes many beautiful species of shrubs growing from three to eight feet in hight. The botanist PURSH, on first seeing the *Azalea Calendulacea* exclaimed: "It is the handsomest shrub in North America." Of this species, there are three known varieties. *A. Nudiflora*, has flowers varying from nearly white to full red. Elliot says of this: "It is one of the most beautiful plants which adorn the forests of this country." In transferring these honeysuckles from the swamps where they chiefly abound, to our gardens, it is important to choose those which have grown in an open spot, and to be sure to take up the whole mass of roots and soil together, and set them out unbroken, if you would be sure of success.

To our view, *A. viscosa* is not quite equal to *nudiflora*, but it blooms after that has faded, and its odor can not be excelled. Its flowers are white. *A. glauca* is another variety, but similar.

In regions where these "Swamp Pinks" abound, the flowers are gathered by the country-people, and afford the finest possible bouquets and mantel ornaments throughout the month of June. In setting the plants in our gardens, we should give them a shady situation and a moist, peaty soil, so far as possible.

But we have not space to describe more of these rural beauties, and can only mention the names of a few others. Ledum latifolium; Shepherdia canadensis; Lonicera parviflora; Viburnum lentago; Cornus stricta, Florida and sanguinea; Taxus canadensis, Prinos glabra, and

verticillata; Spiræa salicifolia, and opulifolia; Ceanothus Americanus; Potentilla floribunda; Menispermum Canadense; Clematis Virginiana, etc., etc. All of these and many more can be found in the latitude of Albany, and are worthy of a place in large grounds.

Planting Shrubbery.

Too little attention, it seems to us, is given to this feature of ornamental planting. Our rural improvers generally persist in setting out coarse timber trees, in rows like an orchard, all over their grounds, and finishing off their work by putting a lilac or a few rose-bushes around the doorway. Well, this is better than nothing. But an improvement can be made on this, as the following hints may show:

Let the forest trees—except on large places—be few in number, and confined mostly to the boundaries of one's premises. The trees near the house should be of smaller size, and such as have smooth trunks and branches. A few shrubs may be set near the dwelling. If the premises are small, like most village lots, single specimens of large shrubs may be set on the lawn and trained up as miniature trees. This will give the place an appearance of larger extent than though it had been set with forest trees. Shrubs may also be planted in groups and masses, arranging them according to their respective hights. They may also be used as screens to hide disagreeable objects, or to conceal one part of the grounds from the other. They appear very well, also, when used to encircle a flower garden; the central beds being occupied with plants, and the boundaries set with shrubs, the lowest in front and the highest in the rear.

As belts to conceal from the house the outer fences of one's grounds, they are also useful. The pleasure walks may be led around in front of these belts, and so afford a pleasant view of them all through the season. If they are set here, instead of being crowded in front of the house, the lawn appears larger, and every way better.

A good assortment of shrubs will afford one a variety of flowers nearly all the Summer, and that with far less trouble than any other class of plants. We will here mention a few of the desirable sorts to plant: Azaleas, in variety; Pyrus *japonica;* Robinia; Spiræa; Deutzia; Euonymus; Hibiscus; Hydrangea; Philadelphus; Syringa; Viburnum; Weigelia, etc. A shrubbery is a permanent affair, one of the "institutions" of a country-place, and should therefore be made well at the outset, and afterwards taken care of. Those well proved and fast friends afford us in the long run, the greatest satisfaction.

Set out a few more Fruit Trees, etc.

Yes, set out a cherry tree by the gate near the road, and another at the end of the house to partially shade the sitting room from the hot sun. The cherry, when well trained, forms a regular, symmetrical tree, ornamental at least when covered with a profusion of snow white bloom, or bending beneath its load of dark red fruit. Set a pear tree in the nook by the shed, and one at each end of the carriage-house. They will injure nothing, and the rich soil will cause them to grow rapidly. Now put out a few peach trees along the garden border where the shade will scarcely injure the vegetables; or a few trees may be set compactly 15 feet apart, and the space they would shade be used for raspberries and blackberries.

There is the lane, too, leading to the pasture, which might well have a row of apple or pear trees upon each side, which will injure the adjacent fields far less than the returns they should give. The road sides, also, can be set with apple trees yielding winter fruit. Such single rows of trees usually give better returns than the same number of trees in an orchard. Again, there is the south side of the barn, shed, and hovel, yes, and the tight fence upon the north side of the garden, which might be covered with grape vines and yield many bushels of fruit.

Now, reader, look about your buildings, around the yards, along the fences, etc., and see if there is not room for a few more trees. Then go to the nearest nurseryman, if he is an honest, careful grower, and select your trees, have them taken up with *all* the roots, take them home without exposure to the sun, and set at once in large broad holes, spreading out the roots and fibers in their natural position. If the soil is not rich, add a little *old* manure or ground bones at the time of setting, and hopefully await the result of your expenditures in time and money.

Puddling.

For nurserymen and others who have much planting to do, this is a practice of great importance. And this is the way: Dig a hole in a central part of your garden, two feet deep, and five feet in diameter, choosing a spot where the soil is quite stiff. If no such soil can be had, the sides and bottom of the hole must be plastered with a thick coating of clay. Now, fill the hole two thirds full with water, throw in a few shovels full of soil, stirring it up with a hoe as you proceed, until it is of the consistency of cream. Some persons recommend throwing in a shovel full or two of cow-dung. A tub or half-hogshead sunk in the soil answers the purpose of a puddling hole, where a permanent one is desired.

On digging up trees, shrubs, or any kind of plants, dip their roots in this cream and stir them about until every part is well covered. On taking them out, sprinkle some fine soil over them, and set them away in the shade. The trees may then be set out at leisure, or they may be transported a great distance before planting. Whether set out at once, or after several days, this puddling will be greatly to their advantage. A little care may be necessary in setting out, to see that the fibers of the roots are not matted together. They should all be spread out in their natural position.

Straighten the Fruit Trees.

We often see in fruit yards and orchards, trees inclining more or less. This deformity is sometimes the result of carelessness in setting, sometimes owing to prevailing winds in exposed positions. After a few years the inclination becomes permanent, to the great damage, not only of the beauty of the tree, but of its usefulness. For the erect habit, with a broad, well balanced head, is the normal position of a fruit tree, in which the aliment from the soil and the rays of the sun are most equally distributed among all the branches. In this position, too, it will sustain, without dammage to the limbs, the largest burden of fruit. We have noticed that the apple borer is sure to make its attacks upon the under side of an inclined tree, where it is, in some measure, sheltered from the rain.

Though this may seem a small matter to the fruit grower, he will find it will pay well for his labor, to put these inclined trees into an erect position. If they have been thrown out of line by the prevailing winds, it will be well to throw them up a few inches into the wind, to make allowance for the future influence of the wind upon their growth. The best instrument to straighten them with, is a forked stick from the woods, ten or twelve feet long. Sharpen the lower end, so that it will stick firmly in the ground, and bring the crotch under one of the lower limbs, where it will not slip. A padding of straw or old cloth in the crotch, will prevent any injurious effects upon the bark of the tree. Loosen the soil on the windward side of the tree to prevent binding. A single season will generally suffice to make any tree permanently upright. The best time to do this is at the beginning of the growing season.

In the case of small trees, and where forked stakes are not convenient, the work may be done by a stout cord, fastened to a stiff stake, driven into the ground. In this case the tree has to be pulled into position, instead of being pushed. The cord, where it goes round the trunk, should have a padding of straw or litter. In case of large trees it is sometimes necessary to cut an obstinate root, that holds the tree in a leaning position. A little attention in a young orchard will make all the rows straight, and the trees longer lived and more fruitful. In setting trees at first it is well to incline them towards prevailing winds.

Grafting the Gooseberry upon the Missouri Currant.

To the Editor of the American Agriculturist:

I have succeeded in raising gooseberries even in unfavorable situations, by grafting them upon the Missouri or yellow flowering Currant, (*Ribes aureum,*) which is quite common as an ornamental shrub. I graft in early Spring, before the buds of the cions have swelled. Insert in the usual cleft manner, about two feet from the ground. The little "gooseberry trees" are quite ornamental, bear abundantly, and the fruit is far less liable to mildew than when grown near the ground. With moderate skill in grafting, most of the cions will grow. W. Dennis.

Grafting Grape Vines.

Many persons have old vines in their gardens which are worthless, or nearly so, and which they would like to replace with something better. Instead of digging them up and beginning again with very small plants of a new kind, it may be well to try and change their tops by grafting. This is the more desirable with such of the newer varieties as are of feeble growth. By insertion in the stock of a more rampant sort, they will be rendered more luxuriant and vigorous.

To do this well, requires more care than in grafting an ordinary fruit tree. The sap of the vine is so watery and so profuse in its flow, that it prevents the nice and speedy union of the cion and stock, but it is often done successfully.

The first thing, of course, is to secure the cions, which should have been cut before the Spring flow of sap, and buried in the cellar or other cool place. In preparing them for insertion, select strong, well-ripened wood. Some persons succeed in grafting, early in the Spring, at the usual time of orchard grafting, but this is not as favorable as a later period. Early in June, or when the leaves of the stock are well developed, and the first rush of sap is over, head down the vine to two or three inches below the surface of the soil; make a clean cut with a fine-toothed saw, and pare off the edges of the cut smooth with a knife. Then, make a vertical slit down the stock with a chisel

and insert one or two cions (according to the size of the stock,) in the usual cleft manner, taking care to bring the inside bark in contact with that of the stock, as in grafting trees. The cion should have two or three eyes, the lower one being just at the junction of the bark of the cion with that of the stock. Bind the stock well together with a string, as it is apt to spread open and let the cions fall out; then cover with wax. The string will rot and break before it does any harm to the growing vine. Draw the soil over the whole, leaving only one bud at the surface. This latter point is worthy of *special* attention: the whole question of success may hinge on this little thing. If the work is well done and a vital union effected, the cions will grow many feet the first season.

Freak of a Flower.

A subscriber writes: "Three years ago I purchased a Chrysanthemum. The first year after, it blossomed, and the flowers were very small and very pale blush; the second year the same, and last Fall, the flowers were as large and fine as a German aster, of a pretty mottled rose color. The plant was in a large pot, and was not re-potted nor the earth changed. Can you explain this?"

We can not fully. It is known that the character of the bloom is sometimes undetermined for two or three seasons; the shades of color often deepen as the plant increases in strength. Plants also occasionally *sport* in this way. The rose sometimes comes out in a new dress of bloom, quite different from its wonted habit, and other flowers are subject to the same freaks. It is an interesting matter for investigation by vegetable physiologists. A discovery of the cause might enable us to modify the color of flowers.

For the American Agriculturist.

What Flowers to Cultivate.

First, we shall suppose our garden adjoins the house on the sunny side, and is overlooked by the windows of the sitting room. It is sheltered from the north and east winds; is open to the south, and its surface uniform. We have exchanged our poor surface soil for good loam, and have made it deep by sub-soil plowing and trenching. The plan has been carefully studied, and is adapted to the surroundings—now what shall we put in it?

Much of its beauty will depend upon the edgings, for however graceful the arrangement, if the beds have ragged borders, the garden will be a continual eyesore. Dwarf box is a good material for the purpose, as it harmonizes with every thing around, subdues the glare of the gravely walks, can be arranged in any line, and is not injured by trimming. Edgings of grass are very common, [and the best if well attended to.—ED.], but will cause a deal of trouble to keep in order.

The beds, though generally raised towards the center, we shall make quite level, because then those plants which occupy the center, and which require more nourishment—from their larger growth—will obtain their proper share during propitious showers, and the delicate seed will not be washed "down the hill." In making a selection of plants we shall have reference to securing a succession of bloom throughout the season. Probably, taken all in all, no one plant is more sought after, and better adapted for bedding than the VERBENA. Reveling in all the tints of brilliancy which can be desired, it has sufficient hardiness, such a good, compact habit of growth, and many of them such a sun-defying rigidity of petal, that if the tribe were extinct tomorrow, we do not know which family of plants could fill the void. It will grow and bloom in almost any soil, and under almost any conditions, but, for rich and profuse blooming, should be planted about five feet apart, in soil somewhat sandy, which should be kept well open. The system of pegging down should be followed, and the decaying flowers pinched off. They will then soon cover the bed. For a collection of a dozen, we would select: *Robinson's Defiance, Brilliant de Vaise,* and *Giant of the Battles,* scarlets; *Anna Cora Mowatt* and *Odoratissima,* purples: *Mrs. Thorburn,* and *Lady Palmerston,* blues: *Mrs. Holford* and *Annie,* whites: *Uncle Tom,* maroon: *Imperatrice Elizabeth,* violet rose, white, striped, small, and delicate foliage, and *Madam Lamouniere,* lilac striped with white. To which might be added *Le Gondolier,* carmine; *Lord Raglan,* scarlet cherry; *Fanny Fern,* brick red; *Queen of Summer,* salmon blush; *Mrs. Mildmay,* rosy pink.

The ROSE needs no eulogium, it gives its own, in fragrance and beauty, and will ever be a favorite. For a dozen we should select, *Giant of the Battles,* crimson; *Souvenir Malmaison,* blush; *Baronne Prevost,* bright rose; *Caroline de Sansal,* delicate flesh; *Jules Margottin,* carmine purple; *Madam Laffay,* rosy crimson; *Hermosa,* flesh; *Louis Odier,* clear rose; *Aimée Vibert,* white clustered; *Madam Rivers,* flesh; *La Reine,* lilac; *William Griffith,* rosy lilac. Tea roses are not adapted to bedding, as in this latitude they require to be housed in Winter. *Comte de Paris,* creamy white; *Safrano,* fawn; *Isabella Gray,* golden yellow; *La Pactole,* lemon yellow, are each worthy of a position in the flower border.

For the best twelve PELARGONIUMS (Geraniums) we should take six *Tom Thumbs,* scarlet; one each of *Aurora,* cherry; *Lady Turner,* finest white; *Brilliant,* scarlet, silver-edged leaf; *Consuelo,* rosy pink, white eye; *Duchess of Kent,* French white; and—*Tom Thumb* again.

FUCHSIAS—commonly called "Ladies Eardrop."—Of this queenly flower, it puzzles us to limit our choice to twelve. *Florence Nightingale,* scarlet tube, white corolla; *Duchess of Lancaster,* white reflexed sepals, violet corolla; *Queen Victoria,* carmine sepals, white corolla; *Venus de Medici,* white tube, violet blue corolla; *Wonderful,* scarlet reflexed sepals, violet corolla; *Prima Donna,* white sepals, violet corolla; *Macbeth; Mrs. Story; Charlemagne; Trentham; Prince Albert; Joan of Arc.*

Few hardy herbaceous plants exceed the PHLOXES in brilliancy and variety. **Gæthe, Alice, Allaire, Bella, Marie Lamacq, Eugenie, *Gracilis, *Venus Cambaceres, Lawrence; Sax, Henri Lavergne.* Those marked * are the *Suffruticosa,* or dwarf variety, growing 2 feet high, and should be planted on the outside; the others are the *Decussata* variety, with strong erect stems, attaining the hight of 3 to 4 feet. These plants fill up a void which occurs in August and September, are perfectly hardy, and will grow in almost any soil.

We must not forget the beautiful class of plants called VERONICA. Of easy culture, they flower all the Autumn, and within the precinct of Winter. The flowers, in erect spikes of white, blue and pink, are very attractive and pleasing. If better known they would be more appreciated. PLUMBAGO *capensis,* with light blue flowers, good foliage, and blooms nearly all the season. VINCA or periwinkle, red and white, immense bloomer, rich glossy foliage. CUPHEA, commonly called Ladies' cigar, very interesting and immense bloomer. SALVIA, a family of great beauty; *S. patens,* blue, and *S. fulgens,* scarlet, are very desirable. BOUVARDIA, a fine plant with graceful, tubular flowers in clusters. LOBELIA, *cardinalis fulgens,* and *speciosa,* the first having an erect stem two to three feet high, a mass of scarlet bloom, the latter bright blue flowers. The PETUNIAS are well known, and should be in every collection: they sport greatly when raised from seed sown the previous Fall. The LANTANA has a pretty flower, rank foliage with a rough stem, but is a great bloomer; the finer they grow, the more profuse they flower. They form small bushes with pink, yellow, and orange heads. The PINKS and HELIOTROPES are popular favorites, and will, all of them, be highly prized for their fragrance and beauty. Before dismissing our subject we must not forget our young friend, the exquisite DIELYTRA SPECTABILIS, unquestionably the finest of all hardy herbaceous plants. W. H. WILCOX.

Westchester Co., N. Y.

Planning the Flower Garden.

There are two leading systems, according to which ornamental gardens may be arranged. One is, planting the beds indiscriminately with various plants, so selected and distributed that they will regularly succeed each other in their time of flowering, and be of different colors, hight, and general habit. The other is, setting each bed with only one kind of plants, and having the colors so arranged that they will produce the most striking contrasts, and the most harmonious whole. The first method is employed when the plants are a mixture of perennials, biennials, and annuals. The latter, when only annuals or "bedding plants" are used.

The first may be less fashionable, but it gives the greatest enjoyment to all classes and ages, and is, on the whole, the most desirable. In such a mixed garden as this, an assortment of flowering shrubs and vines may well be introduced. The herbaceous perennials should be so selected, as to afford flowers in succession throughout the Summer, and that of a variety of colors. This can easily be done by a little observation on the part of the planter. To do it, does not require a multitude and a great variety of plants; a few kinds well chosen and wisely distributed, will accomplish it.

Let a plan be fixed upon before beginning. The colors of flowers may be conveniently ranged under the four general classes of red, white, blue, and yellow. Suppose now, we are to plant a border which is wide enough to contain four rows of plants. We would place the smallest near the walk in front, the next in hight behind these, and so on, setting the largest and tallest in the rear. The back of the border would naturally be the place for shrubs, roses, honeysuckles, and other vines. We would set plants next each other which bloom at the same time. The arrangement of color should be a matter of considerable forethought. Having a list of his plants before him, the gardener should spend many evenings, if necessary, with paper and pencil, distributing his plants so as to produce the best effect of colors. Take these hints: Yellow harmonizes with blue; blue with white; red with white; and then orange with purple; crimson with blue; scarlet with white; pink with white, and so on. Lady gardeners need no instructions on this point: instinct teaches them.

What has now been said, supposes that the plants are to be viewed from only one side. When the walks are on each side of the bed, the taller plants must be set in the middle, and the smaller ranged around them.

Beds that are to be devoted to annuals or bedding plants, may very well be set with early flowering bulbs, which will be out of the way before the other plants come on.

How to Shape a Flower Bed.

Young and inexperienced gardeners often find it difficult to give the right proportions and shape to their plots. A plan is, or should be, first drawn on paper, where it may look very well, but when it is worked out on the ground it often happens that the intended circles are not circular, the ovals are flattened on one side, the hearts are more like gizzards, and the young tyro is discouraged by the bungling attempt, and wonders how those neat regular forms he saw in his neighbor's ornamental flower plot were made. He can easily mark out the squares, diamonds and other figures bounded by straight lines, but the curves, which look so much more beautiful are beyond

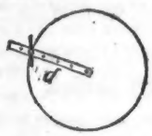


Fig. 1.

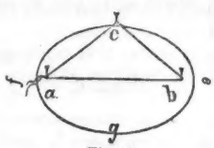


Fig. 2.

his art. It is quite easy though, when the right implements are used, which are very simple. For striking out circles, provide a light strip, *d*, Fig. 1, say eight feet long, three inches wide, and an inch thick, and bore ¾ inch holes through it, six inches apart, the whole length. Provide two pins of hard wood, sharpened at one end, to fit the holes in the strips, and you are ready for work. Make the surface of the ground as even and free from stones and lumps as possible, set a pin where you wish the center to come, lay the strip over it, put the other pin through the hole that will give the right diameter to the circle, and sweep it around. Fig. 1 shows the whole very plainly.

To mark out an oval, (fig. 2,) first mark the points of the greatest length and width as at *e*, *c*, *f*, *g*, drive a stake at *c*, and draw a line from *e*, to *f*. Take a rod or string half as long as this line, fasten one end at *c*, and carry the other around until it meets the line *e*, *f*, as at *a*, and drive a stake at that point. Carry the string around until it meets the line *e*, *f*, near the other end, as at *b*, and drive a stake there also. Then pass a cord around the stakes *a*, *b*, and *c*, draw it taut, and tie its two ends together. Pull up the stake *c*, let its lower end rest on the ground and against the inside of the cord, and carry it thus around the plot, and it will mark out the oval through the points *e*, *c*, *f*, *g*.

If it is desired to lay off curved figures, as shown at *F*, *E*, first set small stakes say eighteen inches apart in a direction to form the outline, and then having but a little distance to mark from stake to stake, it will be easy to get it right.

New Annual Flowers.

The amateur in search of superior novelties for the present Summer, should not fail to get the following if they can be had. Clarkia pulchella *integripetala*, the hybrid blue Sweet Pea; Callirrhoe *digitata*, and Callirrhoe *pedata*; Œnothera *hirsutissima*, from California; Dianthus chinensis *laciniatus*, which grows two feet high, with flowers about four inches in diameter, of various colors, and blooms till frost; Dianthus chinensis *Heddewigii*, one foot high, flowers three inches in diameter, and of various colors; Anagallis grandiflora, *var. Eugenie*, light blue, shading from the center to a pure white border; Anagallis grandiflora, *var. Napoleon Third*, rich maroon crimson; Nemophilla discoidalis *marginata*, like the old discoidalis, but with a white border. The Dianthus *Heddewigii* is greatly lauded by foreign florists. They say the plant is quite large, the leaves broad and bluish green, thirty or forty blooms open all the while and sporting into various colors. Each flower measures about three inches in diameter.

Of Callirrhoe *pedata*; Prof. Gray says: (See Transactions Mass. Hor. Soc. p. 30.) "This is a biennial from Texas. The young plants require the protection of a frame through the first Winter, and planted in Spring, they produce all Summer long a succession of rich, *mauve*-crimson blossoms. In a Conservatory they often attain the hight of seven or eight feet. It is the handsomest of malvaceous plants."

To these we may add Clarkia *pulcherrima* described as far excelling C. *pulchella*, the flowers being twice as large, more profuse, and of pure brilliant carmine; Schizanthus *Grandiflorus oculatus*, brilliant purple, with dense dark blotch, larger than other varieties; and Heliophila *Cærulea stricta*, a very pretty variety, of fine rich blue color. The colored prints of the last three show them to be of great beauty, and to deserve the high praise they have received in Europe. Small packages of seeds of these were obtained in England, and placed on our list for distribution as an extra premium. See page 128, April No.

The Farfugium Grande.

This plant is destined to make a great sensation the present year: we wish, therefore, to say a few words about it.

It belongs to the Coltsfoot class. The leaves are large, sometimes more than two feet in circumference, of a bright emerald green, curiously spotted with patches of clear yellow. They have footstalks from twelve to fifteen inches long, and lapping over each other in luxuriant growth form tufts of foliage truly magnificent. The flowers are not particularly striking. If not injured by late frosts, it may be taken into the house, and will there retain its foliage all the year. It is particularly valuable as an ornament for the greenhouse or parlor, enduring furnace-heat and dust as well as a Begonia or Oleander.

Not least important, it is *almost* hardy enough to endure the frosts of any climate. It came from the North of China, being introduced by Mr. Fortune, who has done so much to send us the plants and trees and shrubs of that "celestial" land. As it is hardy in England, it will undoubtedly be so in our Southern and Middle States. North of this city, it will probably require wintering in a pit, or green-house, or cellar. But it will amply pay for this trifling care by its splendid show throughout the Summer. Would it not make a striking object in a vase on the lawn, or in an ornamental pot or box set on a terrace or veranda? If a circular bed six feet in diameter were cut out on the grass-plot and set with four or five plants, it would make a grand show.

The gardeners tell us that its cultivation is simple. Divide the roots, and set them in a mixture of leaf-dirt and good garden soil. It likes considerable moisture during active growth, and the gold tints of the leaves are more distinct if it is favored with a little shade at mid-day. Hear what the English Cottage Gardener says: "For the next few years, this will be the most popular plant among the variegated-leaved plants, because it is everybody's plant; a plant for the Queen's drawing-room and for the rooms of all her Majesty's subjects; also for their rock-gardens, wilderness-dingles, and all places not too much exposed to the sun."

New Petunias.

Countess of Ellesmere is one of the best; compact, bright rose-color, with white throat. *Inimitable* is one of the most striking sorts; a white ground color, blotched irregularly with bluish purple. *Mrs. Buchanan;* crimson, beautifully striped with pure white. *Hermione;* large, white ground, clouded with delicate flecks of blue. *Little Nell;* a charming thing, light ground, covered with a crimson net-work. *Attraction;* purple ground, finely striped, good shape. *Exquisite* is perhaps the best white. *Antigone* and *Gen'l. Havelock* the best double whites.

Roses from Cuttings.

A correspondent who has some twenty different varieties of fine roses, wishes to learn how to propagate young plants from cuttings.

This is not difficult. Prepare a frame six or eight inches deep, on the north side of a fence or wall, and half fill it with good garden soil mixed with sand and leaf-mold. On top of this put three inches of clean sand. The sand is used to prevent the rotting of the cuttings before they begin to grow, and to facilitate the emission of roots from the lower end. The cuttings should be made of newly ripened wood, five or six inches long, and inserted two and a half inches in the sand, so that as soon as the roots have grown a little, they will find their way into the soil underneath, and so obtain the nourishment they require. In June, just after the first blooming season, is considered the best time.

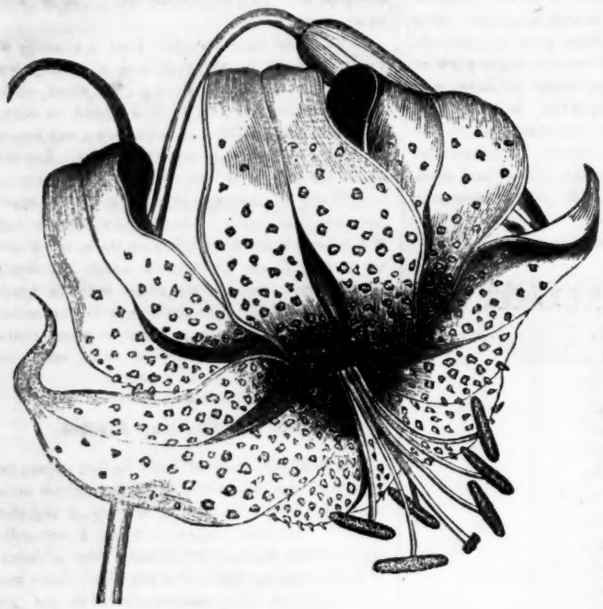
If each cutting has a "heel" of old wood, it will be quite likely to strike or grow. Strip off all but one or two of the upper leaves. Stick in the cuttings to the depth mentioned, give a good watering, and lay on a common hot-bed sash. Take off the sash every warm night. Every day or two, give the plants a sprinkling, just at even ing. After they have made a good growth, they may be transplanted separately into pots; or they may be wintered in the frame, if well protected.

New variety of Moneywort.

In a former volume, we gave some account of the common Moneywort, (*Lysimachia numularia*) a trailing plant, similar to the periwinkle, and having yellow flowers. A new variety has just been brought into notice, called *Lysimachia nutans*. It grows erect, and has spikes of crimson flowers, three inches long. Its entire hardiness for this climate has not yet been determined.

Raise your own Seeds.

To be sure, a single paper of seeds costs but little, but to fill a good garden plot with the whole round of vegetables each year, makes up quite an item: "'Tis too much trouble," says neighbor Easy, "to be fussing with these little notions." Grant that it is some "trouble" to set out a dozen or fifteen varieties and take care of the seeds—"there can be no gains without pains." Try this: have an understanding with two or three neighbors, and each raise 4 or 5 kinds and exchange; or yourself raise a few kinds—say this year *in abundance*, and a few kinds next, and so on; for this will be easier than to care for all the varieties at once. By extending this arrangement, each family in a district might be easily supplied. YANKEE.



Japan Lilies.

These beautiful flowers, brought from Japan some twenty years ago, were, until within a few years, considered too tender for out-door culture, and the books and horticultural magazines gave minute directions for their treatment in pots. They are, however, as hardy as many of the common garden flowers, surviving the alternate freezings and thawings of our most rigorous and changeable Winters. A flower of such beauty should be more generally cultivated. Bulbs can be obtained of seedsmen, florists, and nurserymen, but as they are still rather scarce, they command from 40c. to $1, and even $2 each, according to rareness. A few bulbs can easily be increased in a single season by the natural offsets, or still faster by separating the scales and potting them, or placing them in a moderate hot-bed with plenty of sand. Whole bulbs may be planted either in Fall or Spring—better in the Fall, usually. They may be put in common garden soil, but thrive better where the ground is dug deeply, and has a coating of manure, and plenty of well decomposed muck worked into it. If inclined to clay, an addition of sand with the muck will be beneficial. Set the bulbs with the crowns three inches below the surface, and cultivate like other lilies. They grow from four to six feet high, and have a nodding bloom, as shown in the engraving. There are several varieties of the Japan lily, conspicuous among which is the *Speciosum*, figured herewith. This has a pink and white ground, its reflexed petals being beautyfully spotted with red and crimson. Planted in beds one foot apart each way, they produce a fine effect, besides emitting an agreeable fragrance. Upon the approach of Winter, it is well to cover with a few inches of coarse manure, which serves as a partial protection, and enriches the soil. They should not be moved often, differing materially from the tulip in this respect. Every fifth year is quite often enough, and it is better to leave them even longer.

Time for Planting the Garden.

That "haste makes waste," is true in gardening. One swallow does not make a Summer, nor will one, two, or three warm days early in April make it safe for the gardener to commence operations, as inexperienced beginners are usually in haste to do. Egg plants, tomatoes, and cabbages from the hot-bed, and tender leaved cucumbers, squashes, beans, etc., can illy withstand long continued cold rains, even if they escape the late cutting frosts. Excepting the hardy vegetables, as spinach, radishes, lettuce, onions, peas, winter cherry, etc., which, with raspberries, blackberries, currants, gooseberries, grapes, asparagus, and rhubarb may be planted from the first to the tenth of April, in this latitude, there is little gained by putting in seeds or setting out plants before the fifteenth, and often not till the twentieth of the month. Let the ground be sufficiently warm to start the seeds quickly, and push the young plant forward rapidly, after it is up. A memorandum of some of our own planting may be of service to the novice, beginning with those kinds not enumerated above.

April 12, sowed seed for early turnips, kohl rabi, a few beets, and planted early potatoes; 15th, sowed a few carrots, planted a little early corn, some cucumbers, nasturtiums, and salsafy; 20th, set out early cabbages, cauliflowers, lettuce, and tomatoes from hot-bed; also sowed parsneps, and planted early beans; 25th, planted late beans, more corn, potatoes, late squashes, remainder of the carrots, water and muskmelons. May 2d, set out egg plants, and more tomatoes; sowed peas, spinach, radishes, and lettuce for succession; 10th, sowed rest of the beets, and more peas. June 1st, planted more corn, and sowed peas again; also set out late cabbage and cauliflower plants. July 5th, sowed turnips for general crop on ground cleared from early peas, radishes, lettuce, spinach, and potatoes soon to be dug.

The Lima Bean.

This is probably the best leguminous plant grown in our gardens. It has a rich, sweet, and buttery flavor, which can be compared to nothing but itself. In the neighborhood of each of our large cities several hundred acres are annually devoted to this plant, so great a favorite is it with every body, in season and out of season.

And it is easily raised. As the Summer at the North is a little short for its full enjoyment, it is well to hurry it forward in Spring by a shovel or two of manure in each hill, and raising the hill three inches above the surrounding surface, will help in giving a start. Let the soil all around be mellow and warm, and the situation be well open to the sun. Plant five or six beans to a hill, and if all start, thin them out afterwards to three or four plants. Set the poles in the center of the hill, at the time of planting. Our own practice is to plant in drills on a bed about two feet wide by the side of a cheap trellis or frame, described in Vol. XVIII, page 166, (June No.), and as the vines grow, they are trained up on twine leaders. This gives them more light and air, than when they wind together upon poles, gives stronger growth, and hastens their maturity. When the vines have grown seven or eight feet high, they should be pinched off, so as to cause an earlier and fuller development of the pods below. This last is doctrine for the north—not so important at the south.

When the first frost comes, gather the pods, and you may have Lima beans at Christmas, as fresh, plump, and delicious, as those picked from the vines in August. How? Pick them before the frost has injured them, spread them on the garret floor, or any airy loft, turning them over once or twice while drying. Reserve the largest and ripest for seed. The green beans will need soaking only twelve hours before cooking, the riper ones will need twenty-four. These beans are particularly fine when used in Winter with sweet corn; we have luxuriated upon them recently, and write from the inspiration. They may also be kept, when well cooked, in fruit bottles or cans, by corking and sealing them air-tight, by which process their peculiar flavor is preserved. With such delicacies within reach, there is no need of being limited to the few articles of diet in common use on the farmer's table.

Training Tomatoes.

Tomato plants are too frequently left to take care of themselves. Some gardeners even maintain that it is better to let them lie upon the ground to receive the benefit of the heat absorbed by the soil during the day. There is some advantage in this, but it is more than counterbalanced by their liability to rot, and to be injured by insects and absence of sunshine. Many who attempt to train their tomatoes, do it imperfectly. A single stake is driven in the ground, and the whole plant is drawn together with a string, and tied to the stake, leaving but a small portion exposed to sun and air. A better method, which we have seen practiced, is to "stick" them like

peas, using two or three strong bushes for each plant. In the above cut the plant is spread out upon a frame or low trellis, exposing both fruit and foliage to the full benefit of the sun, as is shown in the illustration above. Of course the frame should be upon the north side, and it is better to cut away some of the branches, and head back those which are too rampant. Trained and pinched back in this way, ripe fruit can be had, from hot-house plants, during the latter part of July. Another method, though not equal to the above, is to drive stakes about the patch, and fasten poles upon them, making a horizontal frame about two feet from the ground. This keeps them up, but they do not receive the exposure needed, so well as when trained to the upright frame in the manner above described.

How to Raise Melons.

Many persons at the North, especially those who have a stiff and cold soil to deal with, complain that they can not raise melons. They have not the time or the means to grow them in hot-beds, and in the open air their plants make only a feeble growth, and produce a few half-ripened, puny melons just at the setting in of frost.

Melons at Christmas are hardly to be desired, and we think they can be had before that time by several months. Our way is this: Early in May select a warm spot in the garden, dig holes four feet wide and eighteen inches deep, throwing aside the poorest of the bottom soil, bring in coarse sand and some leaf-mold from the woods, and a little old manure; mix all thoroughly together, adding about one fourth of good garden soil. Each hole, when finished, is raised from four to six inches above the surrounding surface. The seeds being planted, (and we take pains to secure good seed,) cover the hills with rough boxes, six inches high, and three feet square, and place over each a frame of glass or millinet. This breaks off the cold wind, and keeps out the little black bug, and him with the striped jacket. Sometimes, we cover the ground around each hill with an inch or two of pulverized charcoal, and it absorbs the heat of the sun's rays, and makes the plants grow rapidly. The frames should be taken off during the middle of hot days. When the plants have filled the boxes, they (the boxes) should be stored away under cover, and so can be made to last for several years. We have recently seen vine protectors, made by tacking millinet upon four sharpened sticks of, say two feet in length, fastened together at the top by strips of leather, and spread at the bottom enough to cover the hills. These are very convenient, and can be folded and packed in a small compass to be laid away when not in use.

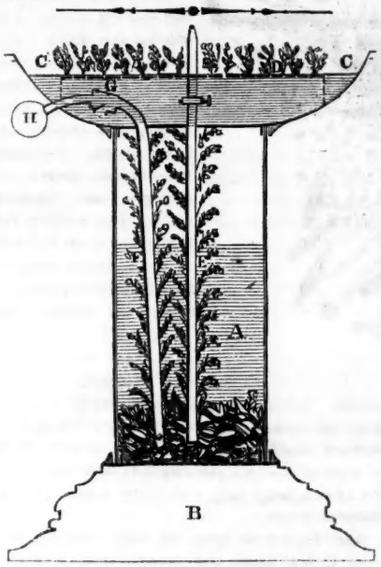
The fruiting of the vines may be hastened considerably by nipping off the leading branches. Muskmelons produce their fruit at the axils of the first leaves of the lateral shoots. If the leading branches are allowed to run, these laterals will not push out, until the branches have grown to a considerable length. Pinch off the leaders, then, as soon as they have made three or four leaves: this will give at least a week's gain of time. And when the bearing shoots have made three or four leaves beyond the fruit, nip them off likewise.

A simpler mode than the foregoing, and one that sometimes succeeds, is to prepare the hills as already mentioned, plant the seeds, and lay down four bricks flatwise around the hill, and place over the space between a large pane of window glass. When the plants have reached the glass roof, set the bricks on edge, and lay on the glass again. By the time the plants have outgrown their quarters, they will be strong enough to defy the bugs and the open air.

Let us not omit to say that manure should be placed not only in the hill, but should be spaded into the surface between the hills, to feed the plants when the roots have extended beyond.

As to varieties: the Christiana is a fine early muskmelon; the Green Citron, Skillman's Netted, Fine Nutmeg, and Rock melon are good late sorts. Among watermelons the Black Spanish and Mountain Sweet are superior sorts.

SAVING A WASTE CORNER.—A friend, who makes the most of everything, once showed us a novel way of turning a waste place to account. In one corner of his small enclosure was an unsightly pile of stones and rubbish, which he could not at the time remove. He leveled it so as to support a tub made from a barrel sawed in halves. This was neatly painted, filled with good soil, and cucumbers planted in it. When the vines grew to need support, a horizontal frame of laths was carried out from the edges of the tub, upon which the runners soon extended and fruited quite full. It looked very pretty, the cucumbers were kept up from the ground, and he said were of better flavor, and thus the corner became a profit instead of a nuisance.



A Self-Acting Fountain.

The fountain here represented, which is a modification of a foreign design, is intended for a hall or conservatory, for which it appears to be very well fitted, being neat, portable, and not necessarily very expensive. As the name, "Self-acting" indicates, it does not require a living stream to feed it, and may therefore be used where such a supply is not obtainable. It has, however, the disadvantage of operating but a short time without attention. The construction is easily understood by reference to the figure. *A*, is a glass or metal cylinder, say two feet long and nine or ten inches in diameter, made strong enough to bear a moderate pressure. *B*. A zinc stand, with a rabbet at the top-edge to receive the bottom of the glass cylinder. *C*. A bowl made of zinc to hold water, and rabbeted to receive the top of a glass cylinder, both top and bottom to be fixed firm to the glass cylinder with cement, and made both air and water tight. *D*. A loose zinc cover to hide brass top and valve, is made to slip over pipe *E*, and is pierced with holes, so that ornamental or fresh flowers may be placed therein. *E*. A pipe one quarter of an inch in bore, with brass cock, the top end of pipe to be fined down to a hole about the size of a needle's point, and to stand up about three inches above the top edge of *C*, and to be continued through the bottom of *C*, into the cylinder *A*, to within about two inches of the bottom *B*. It must be made tight in the solder to the top *C*, where it goes through it. *F*. Another pipe similar in size to *E*, and carried down in like manner into cylinder *A*. This pipe, however, must be carried through the side and bottom of the bowl *C*; and between the place where the pipe enters the bottom and side of *C*, there must be placed a box, *G*, having a valve or clack opening inwards, so as to admit water, and then close when in use. *H*. An India rubber ball, with a neck to it, so as to fasten it to pipe *F*. This ball should be three or four inches in diameter.

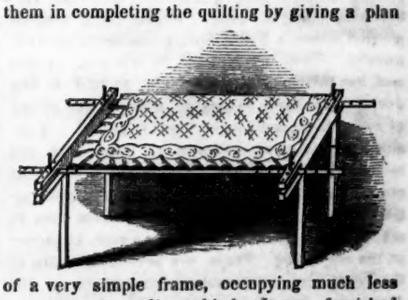
To make the fountain play: pour a quantity of water in bowl *C*, and a portion will run down pipe *F*, through valve *G*; when it stops, commence working the ball, *H*, in the hand, by opening and shutting it; this forms a pump, and forces the water from bowl *C* into cylinder *A*. Let the top of the pipe *E* be shut in forcing the water into cylinder *A*; it compresses the air in the upper part, and that forms the spring. When the ball *H* has been worked for a few seconds, open the top of pipe *E*, and you have a small but lively jet of water playing for about half an hour.

The pipes in the cylinder *A* may be ornamented by fastening flowers or imitation plants round them; and the bottom may be made rocky before putting the apparatus together.

Quilts and Quilting Frames.

It *looks* like a waste of time to buy calico, cut it up into inch pieces, and spend the leisure evenings of a whole Winter in sewing it together again in fantastic shapes, to make a bed-quilt, which, when finished, often looks like a failure to harmonize the chaos of a rag-bag. There may be economy in using remnants of cloth and partly worn garments in this way, and much taste may be displayed in the arrangement, but quilting merely "to make a spread" in the manner first described, is not profitable industry. Making quilts of pieces otherwise wasted, is a good initiation into the mysteries of needle-work for the younger girls, and quilts not too thickly wadded, make very good bed-clothing. Quilting parties, too, are very popular social gatherings, promotive of pleasant feeling among neighbors, and too fully Americanized to be easily abolished. Quilting frames, however, are generally voted a nuisance by the "men folks." As usually made, with four ten-feet strips, and set upon the backs of chairs, they monopolize the room occupied for the time, are easily overturned, and occasion much inconvenience.

As many have by this time finished their patchwork for the season, we will try and aid them in completing the quilting by giving a plan



of a very simple frame, occupying much less room than the ordinary kind. It was furnished for the *Agriculturist* by Isaac Evans, Crawford Co., Ill. The "men folks" will no doubt be glad to make a set, both to please their better halves, and to abate the nuisance they complain of. The end pieces are made only about four feet long, with an open mortise let into each end to receive the rounded extremity of the side pieces. Holes are bored through at right angles with the mortises, to receive pins, with which to keep the "stretchers" or long side pieces in place, when the frame is in use. The long pieces may be of plank strips, left square, or better, worked eight-sided the whole length, with the ends rounded to turn easily in the mortises. Holes are let through to receive the pins that pass through the mortises. When wanted for use, the quilt is stitched to cloth strips fastened on the side pieces in the

usual manner. One side is rolled up, the ends of the "stretchers" are placed in the mortises, and fastened with pins, as shown in the cut, and all is ready. It is better to have legs attached to the end pieces, on which the frame may stand, than to rest it on the backs of chairs. When one width is finished, and the quilt is ready to roll, the pins are removed, the quilted part brought on to the front roller by turning the side piece, and the pins inserted again.

Apparatus for Ornamenting Cakes, etc.

The beautiful designs with which bakers and confectioners ornament their work, require a practical knowledge of the art which no mere description can give. They use only a few simple instruments, but practice and dexterity enable them, with these, to produce very pleasing results. One of their implements in most common use, recommended by Mr. Crozer, an experienced baker, a description of which is here given, will be found very convenient for household use in making scrolls, wheels, borders of beaded work around frosted cake, and fancy trimming of this kind so much in demand for wedding occasions, parties, etc. It is simply a bag of stout cotton cloth, of any convenient size, in the form of a cone or sugar loaf, with an opening of about ¼ of an inch at the bottom. A tin tube about 2 inches long, an inch in diameter at one end, tapering to ¼ of an inch at the other, is slipped partly through the lower end of the bag as shown in the picture. The bag is sometimes made of oiled silk, to better retain the semi-fluid mixture, and tubes of different diameters may be employed to suit various kinds of pastry work. To use it, introduce the frosting mixture or other compound into the bag, gather the top together, gently squeeze it with one hand, and as the roll comes out below, move it about to form the pattern desired. This will be found more convenient than the syringe, recommended in some cook books. The apparatus may also be used for shaping the cakes called Lady-fingers, Macaroons, Jumble kisses, etc. A little practice will enable the housekeeper to present her cakes ornamented as neatly as if done by a professional baker.

Cutting Glass without a Diamond.

A subscriber to the *Agriculturist*, A. Mead, N. Y., writes that glass may be readily cut with a file, by keeping it wet with spirits of turpentine, which gives it a "bite." We have seen the following process recommended for dividing circular vessels as bottles, jars, etc. Fill the vessel with any kind of oil up to the point where the division is to be made. Heat an iron rod to redness, and slowly introduce it into the top of the oil; the glass will crack in an exact circle around the surface of the liquid. The heat imparted to the oil, causes the inner side of the jar to expand rapidly, and thus makes a break.

[REMARKS.—The last recommendation is of doubtful utility. We have often cut off glass bottles readily by first filing a small notch for a starting point, and then applying a hot iron rod, or poker, moving it slowly back and forth along the line where we wished the crack. By keeping the iron ahead of the break, you can *lead* it in any direction desired, so as to cut off the bottle square, or at any angle. When at work in the laboratory, we often made extempore tumblers for holding various substances, by thus cutting off the upper part of bottles, of which the necks had been broken. We have also made gas transferrers, etc., by cutting off the bottom of cracked bottles, leaving the neck and main body whole, with the bottom open. After a little practice any one can, with a hot iron, *lead* a crack in a bottle, tumbler, or along flat glass, in any desired direction. The sharp edges can be smoothed or rounded with a fine file, or by grinding. We have often cut a pane of glass nearly true across, by filing a slight notch in the edge, laying on a cold iron, or even a strip of wood for a rule, and then passing a hot iron back and forward, along the place where the fracture is desired.—ED.

Familiar Talks by the Doctor.....V.

MR. EDITOR.—Another thing that injures the health of our farming population is the entire neglect of all that pertains to digestion. True, farmers are no more careless in this respect than many other classes of people; but for all that, they injure themselves in this way, and it is sorry comfort that mechanics do the same thing. The process of digestion is, after all, an important one. Our food contains, or ought to contain, those elements which are best adapted to supply the waste of our bodies, for our bodies are constantly wasting. Every movement made, every breath drawn, every idea which enters our minds causes more or less of waste. The complicated machinery of our bodies is constantly wearing out, and as constantly requires to be repaired. From our food alone, can supplies for these wastes be drawn. But something more is necessary to fit our food to nourish (that is to repair the waste of) our bodies, than to put it into our stomachs. Swallowing one's food is necessary, and to be commended, but some other processes are necessary both before and after swallowing, the custom of so many of the universal Yankee nation to the contrary notwithstanding. It is necessary before swallowing, to chew the food thoroughly. The thing that is necessary after swallowing, is digestion, by which the food is dissolved and its nourishing elements fitted to be taken into the circulation. If we had gizzards, like fowls, it would do for us to swallow our food whole as they do their corn, but not having gizzards it is necessary to grind our food in other ways. It is *probable*, to say the least, that this is the design of the teeth. True, to chew a piece of beef requires some time, but one by practice acquires the habit of biting it once or twice, rolling it up on his tongue, and swallowing it as he would a big pill. But it will not be dissolved so quickly if he gulps it down, as if he had chewed it, and the waste made in his system by his labors, will be *sooner* repaired, if he stops to chew his food, than if he takes it whole. As a matter of *economy of time*, it is better to stop to chew one's food. The process of dissolving also requires time, and a certain amount of quiet. I do not say absolute rest, but of quiet. A certain amount of blood must be furnished to the stomach that it may be able to supply the fluid (gastric juice) which is to dissolve the food. If, by at once engaging in violent exercise, or in any other way, the blood is prevented from going to the stomach, that juice can not be digested. It will act precisely as it would if, instead of being swallowed, it had been put into a bottle, and kept as warm as the interior of our bodies, that is, it will sour, and not only distress us, but be coming up into the mouth—a most annoying thing. Some people's stomachs will bear this for a time, but sooner or later, they give way, though originally as strong as an ostrich's stomach, and you know it is said they can digest nails, (which I do not believe). I shall not take up your valuable pages by stopping to illustrate or to prove these statements. But depend on it, they are true. To state my doctrine briefly, it is this. If you wish to avoid dyspepsia: 1st, take simple food. 2nd, chew it thoroughly. 3d, eat leisurely. 4th, do not go to work too soon after eating. 5th, do not drink too much with your food. Even water may be taken to excess, and it then dilutes the gastric juice till it has no power to dissolve the solids.

It was by neglect of all these rules that Mr. Crustyman, to whom I alluded in my first talk, got his dyspepsia, and that is what makes him so snappish. He has often boasted that he does not waste his time in eating. Well he is a little richer perhaps, but he has to spend some of his extra money in paying my bills. P. H. E.

For the American Agriculturist.

Home-made Bread.

Good yeast is the first thing necessary. To procure it, take one quart of flour, and mix with water enough to make thin, smooth paste, free from lumps. Stir this over the fire until scalded, and when cooled to about blood heat, add one good, fresh yeast cake, previously dissolved in half a pint of pretty strong hop tea. Put this into a jar, and set it in a moderately warm place, until it begins to ferment. Then set it away in a cool place for use. This yeast will remain good, as long as it is kept where it is too cool to ferment.

For two loaves of bread, mix half a pint of this yeast with two boiled potatoes, mashed fine. Then, having mixed three pints of flour with one tablespoonful of lard and half a pint of warm water, add this mixture of yeast and potatoes. Mix and knead well, and set in a warm place to rise, (which may require thirty or forty minutes;) when light enough cut into two equal parts, mould into shape, put into pans, let stand a few minutes to rise a little, and bake in a quick oven.

Never use saleratus or soda in any kind of bread, but instead of these, when it is necessary to correct acidity from too much fermentation, use *lime water*, which is easily made by putting a lump of fresh lime (about one pound) into a jar with one gallon water, and when this has settled clear, (which may require two or three days,) pour off the clear liquid into bottles, and cork tight to preserve from spoiling. This costs nothing but the trouble of making it, and will keep forever, if well corked. R.

Irvington, N. J.

Hints on Cooking, etc.

A CHAPTER ON KISSES.

These are luxuries over which the lips are smacked with satisfaction by lovers of sweet things, and if temperately enjoyed at proper times are innocent as we have proved by trial—bakers' kisses of course—for we take it our readers need little instruction about the other sort. The kind now referred to, are usually in the form of egg-shaped, snowy white lumps with a sweet, crisp, and brittle shell, and soft creamy inside, and are named kisses, perhaps, from their melting so pleasantly on the lips. We are indebted to Mr. Crozer, Mercer Co., N. J., for the following directions communicated for the *American Agriculturist*.

EGG KISSES.—Place in a clean, dry, metal or

common china vessel, the whites of seven eggs—eight if small—and beat them to a stiff froth. While beating, add lemon, vanilla or other extract for flavoring if desired. Then, add by degrees one pound of pulverized white sugar, and mix it through lightly and quickly with the beater, but do not beat it. If stirred too long, it becomes soft, which should be avoided. Now, with a small sized tablespoon, or a teaspoon—gather the "snow" or paste by spoonfuls, and drop them about two inches apart, on paper laid upon a wet board, and immediately set them in the oven or stove.

N. B.—The eggs used should be comparatively fresh and *cold*, as they will form a stiffer froth, or "snow." Do not open the eggs until ready to use them. If any of the yolk should get with the whites, the egg-shell is the best "dipper" to remove it. Have the heat of the oven ready, when you commence beating the whites. Have ready, also, the sugar, and the board or boards wet with water, and the paper spread upon them. For a brisk oven, the boards may be about one inch thick; for a stove, perhaps ½ inch thick will do. Work each portion with the spoon, as it is gathered from the vessel, so as to remove any undue stiffness, that it may have a smooth surface when dropped upon the paper. If already soft or smooth in the vessel, this must not be done. Gather the same portion in the spoon each time, as near as possible. It must be dropped from the *side* of the spoon, and just as the last portion of each is ready to drop from the spoon, lower the spoon down to the right side of the drop, (lapping it over;) this makes each one smooth on top. If the "snow," in mixing, has become rather soft, some of the fine sugar may be sprinkled over the tops, just as they are set in the oven. Half of the above quantity would be sufficient for "beginners." The oven or stove must be only moderately hot, so that the tops and sides will dry or bake without being colored brown, and to accomplish this, your skill or art in baking will be tested. No particular time can be given, as it depends entirely upon the heat. The damp or wet paper under each drop prevents the bottoms from drying, and keeps them soft inside. When you find there is a middling firm crust formed on them, and they will move or slip a little upon the paper; they may be taken from the oven, and quickly removed from the paper, laying each with the bottom upwards, until you have removed them all, when two may be gently pressed together, bottom to bottom.

JELLY KISSES.—Made same as the above. When they are taken from the paper, after baking, place a little of any kind of jelly on the bottoms of each, then place two together, as before. The Jelly should not come near the edge, as it may be squeezed out, when put together.

CHOCOLATE KISSES.—Prepare the mixture as before, and just before setting them in the oven, sprinkle over the top of each some finely grated chocolate. These have a very pretty appearance, and are rich and delicate to those who love the taste of chocolate.

CREAM KISSES OR SHELLS.—These are made from the same mixture, but somewhat larger and baked in the same manner. They are not put together, but after taking them from the paper, the inside soft portion is scooped out with a spoon, leaving a mere shell. These are laid away to dry. When wanted for an ornament to the table, take thick cream and beat it to a light, stiff foam, and fill the shells with it, and arrange them on a plate or dish. If any small fruits are in season, such as strawberries, currants, etc., these shells may be ornamented by placing some of the berries on top of the cream.

POLAND KISSES are baked upon pans or tins, and are not placed together. Grease one or more clean baking tins slightly with lard. When the lard is cold, dust the greased surface with flour, using only enough to give a uniform white appearance. Prepare the mixture of eggs and sugar, and, with a spoon, drop them upon the pan as the Egg Kisses are dropped on paper, leaving the space of an inch or so, between them, and set them into the oven or stove. When a firm crust has formed upon the top, and they can be moved on the pan, take them out and immediately remove them from the pan. These are not so soft inside as the others; but will keep better.

ALMOND KISSES are made and baked as the Poland Kisses, but just before setting them in the stove, sprinkle over the top of each some fine slips of blanched almonds. Besides the making of "Kisses," this *snow* can be used to ornament Pies, Tarts, Custards, etc., by spreading some of it on top of these articles, and setting them in the stove for a few minutes to dry.

The Editor with his Young Readers.

HOW DOES YOUR PICTURE LOOK?

When daguerreotyping was first invented, every body thought it very wonderful. It was a surprising discovery, that light could be so managed as to make a picture. Most of you have seen it done and perhaps had your portraits taken in this way. No doubt you and your parents were very careful that you should look as well as possible when the picture was made. The best clothes were put on, hands and face washed, hair brushed, and then, when the apparatus was ready, you tried to look as pleasant as possible, for a cross expression, a scowl or a frown would have spoiled the whole. We have noticed a more wonderful process by which likenesses are produced. We have seen girls and boys making pictures of themselves, not on paper, or a metal or glass plate, as daguerreotypes are taken, but on material much more lasting; and the work was so well done that it was almost impossible to rub out the image. No particular skill is required; for it is oftenest done when you are not even thinking about it. But what is still more surprising, and greatly to be regretted, is that so little pains should be taken to have a good impression made. Frowns and scowls, as well as smiles, surly and unkind words, and improper actions are thrown out apparently without a thought, and down they go in the picture, for by the method we are writing of, even words are taken. In short, girls and boys, we are all making living likenesses of ourselves. Now to solve the puzzle, for you are perhaps wondering what all this means, take notice of your younger brothers and sisters, and playmates, and see how they are constantly imitating you, or observe how you copy after older persons. Why did little four-year-old Johnny call out when talking very earnestly the other day, "I'll bet you a dollar!" He heard it from some thoughtless person, and it made its impression, and thus too, profane words make their mark upon those who hear them. In this way, bad habits of every sort spread like diseases from one to another, mostly from older to younger persons. But good character too, repeats itself in like manner, and a boy or a man who does right is making living pictures of himself in those around him—so keep your eye bright, your tongue true, and hands innocent, and then you will not be ashamed of your likeness.

KEEP COOL.

The pupils of the Primary department in a large public school in this city, numbering near four hundred children, were one day seated quietly in their room when a mouse suddenly popped out from a knot-hole in the wainscoting and ran across the feet of a little girl. She sprang up in a great fright and commenced screaming, which so startled the other children that many of them also began to cry out loudly, and a general panic ensued which the teachers tried in vain to quell. Some thought the house was on fire, others that the walls were falling, and a rush was made for the street. The girls in the rooms above, hearing the noise, were also frightened into a panic, and ran pell-mell down stairs, and next, some three hundred boys from the highest department followed, pushing, scrambling and shouting until in a few minutes all were out. The people passing at the time hearing the noise and seeing the confusion raised the cry of fire, and soon the bells rang, the firemen turned out with their engines, parents came rushing to the spot, and the whole of that part of the city was startled with the false news that a school house full of children was being burned—and all this hubbub from one little mouse. Fortunately no one was injured, but there was very great danger. In the rush down the stairs many might have been killed or maimed. In a somewhat similar case where the fright arose from the fainting of a teacher, thirty or forty children either lost their lives or were seriously injured. Danger is never lessened, but always increased by fright. When any thing startling occurs repeat to yourselves these words; "Keep cool," and do it, and half the danger will be over. If a horse runs away, don't spring at once from the wagon to strike on your head or break your bones; "keep cool," watch your chances, and stay in or climb out as may seem best. By having your wits about you, it will be easy to discover the best way of escape from any peril.

ANSWERS TO PROBLEMS.

Were puzzles No. 10 and 11 too difficult for you? We have received but *one* correct answer, and shall keep the solutions another month. Try again, and send in a *string* of names.

No. 12. Labyrinth.—Drawings of the right path to the center have been received from Wm. H. Valentine, Matthew E. Henderson, Jarvis H. Arnold, D. S. Carver. (Stick to the Try Company.)

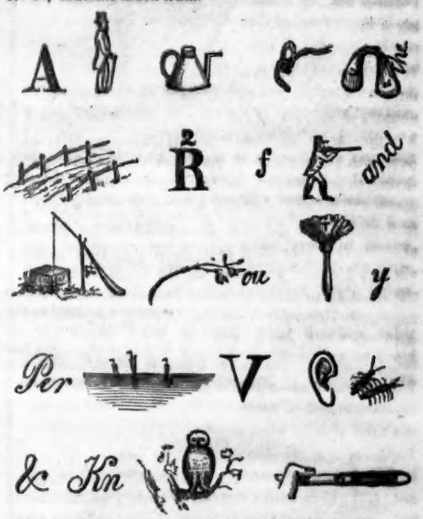
Additional correct answers to problems in the March No., received too late for previous notice.

No. 8. Economical Fencing.—D. White, Wm. B. Kircher, W. M. Summers, Wm. Myers, J. R. S., Thomas Love, A. A. Stephenson, F. Flake, Jr., Edward T. Smith, Elias Slagh.

No. 9. Coins.—D. White, Edw. Wilcox, W. H. Miller, Oliver S. Follett, Jas. H. Dony, Edw. T. Smith.

NEW PROBLEMS.

No. 13. *Illustrated Rebus*, by J. N. Jameson, Ulster Co., N. Y., contains much truth.



No. 14. *Anagrams.*—By this is meant the transpositions or change of the letters in a word so as to form a sentence. Here are four examples of sentences each of which you can change into a single word:

I've no Tax.	No lies etc.
Rural grist I cut.	Ah! of sin.

To get these into shape, a convenient plan is to write each letter upon a separate bit of paper or card, and then place them side by side so that they will spell out a word.

No. 15. *Arithmetical Problem.*—A man has a plank 12 feet long, 12 inches wide at one end, and 6 inches wide at the other. At what distance from the wide end shall he cut it in two, so as to have each piece contain the same number of square inches?

A REAL "BACKBITER."

A gentleman recently related the following anecdote of Hon. N. P. Banks, of Massachusetts, late Speaker of the House of Representatives, with whom he was a playmate when a boy. They took great pleasure in setting traps for rabbits in Winter time, and were generally quite successful. One day they found the trap sprung, and peeping cautiously within the box, discovered a lively little red squirrel, with his bright black eyes wide open for a chance to escape. Our friend was for killing him at once, but young Banks proposed that they take him home and tame him, which was agreed to. They carried him safely to the house and to an upper room, closed the door, and let him loose. He scampered about, sprang at the

SONG BIRDS.
(*Engraved for the American Agriculturist.*)

windows, darted away again when they tried to catch him, and finally scrambled up the inside of the leg of Banks's pantaloons, scratching, as he went, clear up to his back between his shoulders. Here he was stopped by the suspenders, when he at once fixed his teeth firmly in the flesh, and held on until killed by being choked. We presume this cured the boys of trying to tame squirrels, and no doubt gave Mr. Banks a dislike of *backbiters* through life.

WELCOME GUESTS.

The birds are with us again after their long stay in the warm South, where they journeyed when Winter came storming from the North. They do not appear in flocks, as when they were preparing to leave us. Then, in almost every wood, you might see colonies of robins, meadow larks, thrushes, bobolinks and yellow hammers, birds which had not associated before, gathering together as if for a town meeting. They did not sing; they were too full of business for that, but each seemed to give his opinion, in a short, sharp chirp—perhaps they were voting on the choice of a leader—at any rate they were very harmonious, and quickly finished preparations for their long journey, and soon scarce a wing was left; except here and there a hardy fellow like the chickadee, all had flown together. Now they come flitting back in pairs, each has chosen his partner during the leisure of Winter, and they prefer the privacy of domestic life. The bluebird is furnishing the snug little retreat in the hollow limb of the apple tree prepared by the woodpecker last year, the robin peers cautiously about the evergreen near the house, to see if his loved family will be safe there, and the bobolink will soon sing and laugh, and scold all in a breath as he sees his spouse choosing her nesting place in the damp grass of the meadow.

Do you know the birds in the picture? We have re-engraved them from an English magazine. With one exception they are old friends of ours, and of yours. The lively, sharp eyed little fellow on the lower branch is the blackbird. He is a brisk wide-awake chap, as the grubs and worms in the plowed ground have good reason to know. Sometimes he follows in the furrow as it is freshly turned, and you will often see him give an eager snap at some unlucky, fat and lazy grub that lay dreaming of the good time coming when he would feast on the farmer's grain. In feeding himself and his family in the hedge yonder, he will save you bushels of corn which the worms would have destroyed. Some of our friends in the far West, where these birds come at times in immense flocks, may find it necessary to punish them for stealing their grain, but in most localities they protect far more than they eat. Show him by kind treatment that his services are appreciated.

Right above him in the picture is the song thrush, which is seen here only in cages. Even when a prisoner his delightful notes seem full of happy memories, and make you think of the green fields, pleasant streams and shady woods which were his home. He has an American cousin, the brown thrush, that you may often hear just at evening, sending out a sweet strain from the woods that sounds much like a soft, mellow whistle echoing through a long tube.

That demure little fellow at the top *can* sing, for all he looks so quiet. He knows more songs than any member of the grove choir. He can whistle like the quail, carol with the robin, twitter as blithely as the wren, and scream equal to the blue jay; in short, whatever tune he hears, he adds to his list, and will sometimes entertain you for hours with his varied accomplishments. Of course you recognize the mocking bird, a real native Southerner, seldom seen wild north of Virginia, but so much prized that he is a favorite for the cage. *Perhaps* a bird in a cage with plenty to eat and well cared for may be happy, but he does not look so, and if you leave the door open he will soon show his preference for liberty. Canaries, bred in confinement, which would die if exposed, may be kept as pets without cruelty, but there is more pleasure in listening to the song of a free bird, than the complaint of a prisoner however sweetly uttered.

CURIOUS VISITORS EXPECTED.

Many years ago, while we were visiting on a farm in the eastern part of this State, a large colony of strange visitors arrived in town, and it was said that similar colonies were swarming over a large portion of the adjoining country. They came in a singular manner. Each one had his own conveyance, a curious, *buggy-like* contrivance in which all his property was packed. After their arrival they laid these aside, and seemed to care nothing more for them, but spent their time in roaming about the fields and woods, climbing the trees, sawing off the small branches, doing much mischief in this way. All the males carried musical instruments with them wherever they went, and kept up a continual din for weeks. Strange stories were told of them, as that they lived in caves under ground—some said they slept there for seventeen years at a time, and only came up to change their clothes, and exercise a little. They certainly did not remain long—in about five weeks after their first appearance not one could be found.

We did not learn much about them then, but have heard that this year they are expected to come again, and you will be much interested if they visit your town. Their name is Cicada Septendecim. Some persons call them the Seventeen Year Locust, but the locusts belong to a different family, being a species of grasshopper. These last are great eaters, and wo! to the crops when they appear in great numbers, as some kinds of them have done occasionally in this country. The Cicada we are describing comes up from the ground looking like a large brown bug, soon his jacket splits along the back, and a winged insect crawls out, and flies away to the woods. They have not been observed to eat anything, and only damage trees as described below. They take their meals probably under ground before changing to winged insects. The males make a peculiar noise with their wings, by rubbing them together as the Katy-did and the Harvest Fly do. The females have no music box, but are busy piercing the small twigs of trees, and depositing their eggs. They cut the twigs off, eggs and all drop to the ground, the insect hatches in the form of a small grub, and burrows in the earth where he remains seventeen years, and changes to a bug before coming up to take his turn at flying and singing. They die after a few weeks of rejoicing in the air and sunshine.

Colonies or swarms of them appear at different times in different places. The swarm this year is, by many persons, expected to appear along the valley of the Hudson River, and as far east as New Haven, through New-Jersey and a section of Pennsylvania, and in parts of Maryland, Virginia, and North Carolina. Be on the lookout for them through that section in the latter part of this month and the first of June, and if they come, watch them from day to day and try to get a thorough acquaintance with such singular creatures.

A GREAT LOSS.

A subscriber tells of an amusing circumstance which recently happened in his neighborhood. An old gentleman was observed early one morning to come from his room into the kitchen adjoining, where he commenced looking about as if hunting for something lost. He peeped under the table, felt behind the clock, and rummaged in every place where anything might be hid. He was asked what he was looking for? "I've lost myself," replied he, "I've looked every where and can not find myself." His friends were alarmed, thinking him deranged, when he suddenly looked up in great bewilderment, then laughed heartily, and explained that he had been asleep and dreamed he had lost himself. In his agitation he had got up, and was busy looking for his missing body when he awoke.—What could have occasioned such a curious dream? Probably this. For more than forty years the old gentleman had lived with his wife, a most estimable woman, whom he loved devotedly. They had always been as one, beginning life poor and working their way together honorably up to wealth. A few weeks previous to the dream, she had been called away by death, and day and night, the thought of his loss weighed him down with grief, and in dreams, his feelings gave shape to his thoughts—he seemed to have lost *himself*. It was a touching evidence of his love.

PRETTY NEARLY RIGHT.

"What is that, George?" asked a teacher of a young pupil, pointing to the mark (?) used to show that a question is asked. "A corkscrew," replied George. He had seen his father use a corkscrew nearly of that shape, and not knowing his punctuation marks, he gave a guess, which was not so far out of the way after all; for questions are corkscrews, with which to open bottles of knowledge. A boy who asks questions about everything he sees, will become well informed. It is not always necessary to consult other persons to gain knowledge. Ask questions of books, and of every thing you meet with. Inquire of the plants about their stems, and leaves, and flowers, ask the insects how they live; they will answer, not in words, but by showing you, if you observe them carefully and patiently from day to day. In this way by examining and questioning whatever they saw, philosophers have become distinguished for their knowledge. They drew out their wisdom with a?

JUDGING FROM APPEARANCES.—A lady in Nashville was making a visit to the Penitentiary. In one room she saw three women engaged in sewing, and turning to the keeper, who was showing her about, said to him in an

undertone: "Dear me! the viciousest looking women I ever saw in my life! What were they put in here for?" "They are here," he replied, "because I am here; they are my wife and daughters, madam!" But madam was traveling out as fast as possible.

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or Interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Personal Queries.—In addition to what was said last month, it is proper to state, that the time of the Editors, in one sense, belongs to the great mass of their readers, and can not be justly devoted to questions which concern only the asker. Here are examples. One man has found on his farm some shining ore (probably worthless sulphide of iron) and he sends us samples and wants to know if it contain silver or gold. To answer positively, would require at least some hours of chemical investigation, and perhaps an analysis costing $5 to $10, to say nothing of postage on a return letter not provided for. A hundred others describe their several fields, and ask how each shall be cultivated to the most profit—to answer which, would require in every case a careful study and investigation of all the circumstances of location, markets, available manures, previous culture, etc. Let our friends remember that time is money; that to write a letter or even read one, costs time; that individual subscriptions do not average a dime profit each; that we now expend in editorial labor alone over $5,000 a year—or more than the entire income of many journals. We will be just as patient and just as accommodating as we can; will continue to answer individual questions even, *as often* as we can—in short, do all we can to meet the wishes of all our readers—attending to questions of general interest first, and to those of individual interest afterwards, but there must be a limit. "Some things can be done as well as others"—and some can't.

Those Barn Plans, which were called for, have come in quite freely. Forty-seven plans were sent to our care. The plan that comes most nearly to what is desired, will be selected, and a correspondence opened with the sender, who will be entitled to the premium. We have examined several of the plans which seem to be worthy of notice, and perhaps illustration; and after the selection is made, if there be no objections, we shall be glad to examine them all at leisure, and make such gleanings from them as may appear to be useful, and we may have time and room for, during the year.

Don't Nickname—to Exchanges.—A number of our exchange papers which transfer articles from the *American Agriculturist*, give credit by adding the abbreviated words, *Am. Ag.* This is no doubt quite complimentary, as it presupposes every body knows this paper and will recognize the initials. We never did like nick-names however, particularly such outlandish sounding ones as the above. Moreover, there may be yet *a few* who have not seen this paper, and for their benefit, as well as for the reason above, we respectfully ask our friendly cotemporaries, who find articles worth copying, to use the *whole name*.

Massachusetts White Grape.—J. Leonard, Saratoga Co., N. Y., and others. We have not tried this grape, which has been so highly lauded in the advertisements of a Cape Cod nurseryman, and it is not necessary to look after it, after reading the following in the Annual Report of the Massachusetts Horticultural Society: ".....The woods of Massachusetts abound with grapes of similar quality....It has all the strongly marked characteristics of the Wild Fox or Bullitt grape, and is utterly unfit for cultivation."

Raising Grapes from Seed.—E. Ferguson, Monroe Co., N. Y., in alluding to the article under the above head, in the Feb. *Agriculturist*, page 51, says he has been raising seedling grapes for the last ten years, and has produced thousands of plants, but during all this time has only succeeded in getting one really good grape, and that the remark in that article "that 99 out of each 100 seedlings would not be worth raising," was not even strong enough. We do not mention this to deter those who are engaged in the praiseworthy effort of adding to our stock of American seedling grapes, but to show to the novice what a laborious operation it is to produce a really fine grape.

Situation for a Vineyard.—J. C. Oaks, Perry Co., Mo. A side hill is preferable for the vine, unless it slopes towards the north. The inquiries of yourself and others as to sorts, are answered in former numbers.

Root Grafting.—E. Fobes, Penobscot Co., Me. We are opposed to root grafting in all cases. Some nurserymen still advocate it, as the operation can be performed during the Winter, upon trees taken up in the Fall. If practiced at all, only entire roots of small trees should be used, instead of bits of roots, at one time recommended. Our objections are that transplanting a tree after it has just been grafted, so enfeebles its growth that only a weak shoot is thrown up the first season, and another year is required to form a good stocky trunk. It is always better to have a trunk formed by a single season's growth. The next year will give it a good head. Nurserymen practice root grafting much less now than formerly.

Grafting the Hickory.—F. Meissner, Lee Co., Iowa; S. Smith and others. The thick shelled, or "pig walnuts," may be improved by grafting the shag-bark or thin shelled variety upon them, either in the branches or upon the stocks of young trees. The English walnut, (Madeira nut,) can also be grafted upon the hickory. We question whether it would do well upon the black walnut.

To Prevent Forked Trees splitting.—J. T. Moxley, Sheboygan Co., Wis., recommends to twist or wind together a few of the smaller limbs above the fork, which will grow in that position as the tree increases in size, and form a natural brace. He states that he has many trees successfully treated in this manner. We have prevented forked trees inclined to split, and even secured those that had already commenced to part, by boring through with an inch auger and driving in a strong wooden pin. A smaller iron bolt, with a head on one end and a nut on the other end is even better. The new growth will soon cover the pin or bolt.

Downer's Prolific Strawberry.—F. W. Adee, Queens Co., N. Y. Plants of this wonderful berry, "larger than the largest, better than the best, more prolific than the greatest bearers," we hear, are now being sent out at $5 per dozen. Whether the $10,000 are secured, Mr. Downer does not inform us, but those who will send him $5 are no longer to be without a berry which combines all the good qualities of its predecessors, and which leaves nothing to be desired. But seriously, we advise you to wait one season longer, and you will probably find enough at a price sufficiently low to pay for the loss and disappointment of being without them for a year. We question its superiority over some of our well proved and popular varieties.

May Queen Strawberry.—S. S. Thompson, Salem Co., N. J., thinks this strawberry is not sufficiently known, as he does not find it in the books. He describes it as a solid, pale red berry, early and prolific. This is about the character given it in the few books or catalogues which mention it. It is called a good market berry, although rather acid to rank as No. 1 for the table.

Helianthus Tuberosus—(Jerusalem Artichoke.) W., Franklin Co., Mo. This South American plant is cultivated to some extent both for the table and for stock. It is not considered as good as the potato for cattle or hogs, but will yield more per acre. Most seed dealers can furnish the tubers for planting.

A California Carrot Crop.—M. G. Tucker of Crescent City, California, sends an account of his last year's carrot crop on the Klamath Indian Reserve. Six acres of light sandy loam were sown in drills 18 inches apart, the seed being put in thickly, and the plants afterwards thinned out. The yield appeared so large that the product of one acre was carefully weighed, the tops being cut off close before the weighing. The result was 101,600 pounds, or nearly *fifty one tons to the acre!* Many of the carrots measured 30 inches in length, and weighed as high as 11 lbs. each. We do not remember to have seen so large a yield reported elsewhere. Mr. T. writes that the Indians are very fond of carrots.

Esparsette or Sanfoin.—M. Braun, Dallas Co., Iowa. The Sanfoin (Hedysarum *onobrychis*) does not flourish as well in this country as in Germany. It has been tried in the Northern States with indifferent success, not being sufficiently hardy to withstand the Winter. At the South it will probably do better, but we think lucerne would be preferable in your climate.

Loss of Young Queen Bees.—J. Butler, Jackson Co., Mich., writes that he has observed young queens in his hive from 10 to 14 days after the issue of the first swarm, but that 10 days later, the stock would be queenless. He asks for information "What was their fate?"

To Destroy Cut Worms.—E. Armantrout, Clinton Co., Ind., writes, that the cut worm can be effectually destroyed, by making two or three holes in the ground near a plant, from five to eight inches deep with a sharp pointed stick of an inch or more in diameter, into which the worms will crawl after committing their depredations, never again to return. (Why not?—ED.)

To kill Cabbage Lice, etc.—Michael Schott, Col. Co., Mo., recommends to sprinkle Cabbage plants infested with lice or other insects, with a strong tea made from elder leaves. He says, it has proved efficacious in his own practice. Perhaps it might be serviceable in other cases.

Anthracite Coal for Peach Borers.—Jno Ruddell, Carbon Co., Pa., writes that he has found fine Anthracite coal a preventive of destruction by the peach borer. He removes the earth from the trunk of the tree, down to where the roots spread, cuts out any worms found, and places about a peck of fine unburned coal in contact with the roots and trunk of each tree.

Antidote for Ants.—S. P. Shaples, Chester Co., Pa. Take a large sponge and sprinkle it with powdered sugar, letting it sift well down into the pores. Set this where the ants abound. They will soon swarm upon the bait; then soak the sponge in hot water, and sweeten them again. Continue this treatment until they are missing.

Lynching Rats.—E. L. Watts, La Salle Co., Ill., regommends catching a few straggling rats, dipping them in gas tar, and setting them free. He says the others will leave. [Like Mrs. Glass' recipe for cooking the hare. She begins: "First catch your hare, etc." Those straggling rats are not so easily caught.—ED.]

Using Muck—Ashes—Lime.—N. A. Smith of Franklin Co., Mass., writes: "We use a large amount of muck composted with stable manure and in the yards, and with great benefit. It operates finely also when composted with ashes, but these cost us 22 to 25 cents per bushel. Is there not some cheaper alkali than ashes at these prices?"....Ashes are best, because the very soluble alkali, potash, is readily diffused throughout the muck-heap. There is vastly more alkali in a bushel of lime freshly slaked than in the small percentage of potash in a bushel of ashes, but it is not so soluble. Still, it is probable that unslaked lime at a dollar or less per bbl. is cheaper than ashes at 20 cts. per bushel, provided the lime be slaked just before using, and be thoroughly mixed through the heap. The excess of carbonic acid from the decomposing muck, renders the lime somewhat soluble.

More Laying Hens.—A subscriber at North Shore, Staten Island, the doings of whose poultry were given at page 37 of last volume, gives us the following report for 1859: Eggs laid by 30 hens in January, 238; in Feb. 336; in March 478; in April 406; in May 334; in June 311: in July 306: in Aug. 308; in Sept. 257; in Oct. 137; in Nov. 145; in Dec. 365—Total for the year 3621, or an average of 120 to each hen. (That is certainly eggscellent.) In January, 1860, 46 hens laid 421 eggs, and they were doing still better in February. In the above case the secrets of Subscriber's success in Winter consisted of: warm house; ample yard room; plenty of grain; meat scraps; kitchen refuse; chopped cabbages; pounded bones or oyster shells; and clean water.

Blackbirds not Useful.—Newton Southworth, of Scott Co., Minn., in allusion to the plea that blackbirds do more good than harm, by destroying insects, says that these birds are so numerous there, as to destroy their corn crops when ripening. His own corn was half carried off in two days. "You may kill them with strychnine by the thousand, but ten thousand will come to the funeral, and take a lunch while there. Put 50 men on two acres with guns, and let them blaze away, and the impudent birds will sit and eat within ten feet of each man, and almost tell you to load and fire until you are satisfied—they wont miss from their number all you can kill"....Under *such* circumstances, we should withdraw our plea for the birds—but this is an exception to a general rule.

Sugar-Cane Mills—Lost Seeds.—Dr. D. P. of Arkansas, and two or three others will probably get the specific information they desire by addressing John H. Lidgerwood & Co., 195 Pearl-st., New-York, or Hedges & Free, Cincinnati, Ohio....The seeds for Dr. P. which were broken open and abstracted, we have sent again, and will be happy to do the same in other similar cases, when we have the seeds still on hand.

Sheet Lead for Roofing.—John Day, Ozaukee Co., Wis. We are not familiar with this; tin (tinned iron) is much cheaper here than lead. Lead may perhaps be cheaper with you, but we think not. You can readily estimate the comparative cost per square foot, after ascertaining the relative price of the two articles in your locality. Lead sheets can readily be joined by locking, and then solder with the aid of sal-ammoniac, or a solu-

tion of zinc in muriatic (hydro-chloric) acid—rubbing a little on before applying the solder.

Blackberry Seed Slow in Vegetating—To Several Inquirers.—Those who look for this seed to come up at once, will bear in mind that this is the case only under favorable circumstances of soil, moisture, and warmth. In the wild state, the seed frequently remains in or upon the soil for years before growing, and generally it lies over Winter. But planted on a good seed bed, near the surface, it will usually come up in a few weeks. If it does not appear soon, do not disturb it, further than to *cut down* weeds closely; if the weeds are pulled up, the seed may be disturbed. Its vegetation may be hastened by soaking the seed in lukewarm water, for a few hours before planting.

Winter Cherries from Cuttings.—A subscriber in Ontario Co., N. Y., writes that having lost most of his Winter Cherries last Summer by insects, he took cuttings from a few left in the hot-bed, which had already commenced blooming, and set them out the same as in transplanting. They took root, grew well, and yielded better even than the seedlings.

The New Austin Strawberry.—New mode of Introducing fruits.—It will be seen by reference to a card in the advertising columns, that this strawberry, for which high claims are put forth, is to be exhibited at our office and elsewhere, during next month. This idea of the proprietors is a good one, and worthy of imitation. They will in the end find it more profitable than the "open-your-mouth-and-shut-your-eyes" schemes of some operators who profess to insist on having a certain number of orders at high prices, before allowing their fruits to be seen, or at least to come before the public. The confidence thus shown in the new strawberry, by the propagators themselves, gives us reason to hope it may prove a valuable acquisition.

Yellow Fleshed Peach Blow Potato.—Robert D. Weeks, Essex Co., writes that a potato called the Peach Blow, has been cultivated in the towns on the Connecticut river, for 12 or 15 years past. He describes it as of large size, very productive, of bright red color and a good keeper, but yellow fleshed, of strong flavor, and third rate quality for the table. This is a very different article from what is known in this market as the Peach Blow.

Cutting off Corn Roots.—E. C. H., inquires if cutting the young corn roots when hoeing, injures the plants. Yes, without doubt. Every root draws sap and nourishment for the use of the stalk, from the surrounding soil. Weeds should be kept down, however, even if some of the corn roots are broken.

"The Empire Dairyman," is the name applied to an apparatus for heating milk for cheese making, the invention of Messrs. Redington & McClure, of Chautauque Co., N. Y. We have not seen it in operation, but from a somewhat careful examination of its construction, it seems well adapted to uniform and careful heating of milk, and we think it worthy the attention of cheese manufacturers.

Teaching Calves Mischief.—B., Bethel, Me., condemns the practice of teaching calves to drink, by fastening a piece of leather or cloth to the feeding trough for them to suck. He says, it teaches them to gnaw harness, blankets, etc., by which mischief is done. A neighbor of his had a valuable harness spoiled by a calf taught in this way. We would not trust any calf with our harness or blankets, whatever might have been his first lessons in drinking; young animals, like young children, try to get everything into their mouths.

Milking Once a Day.—"Farmer's Daughter, Chippewa, C. W. The amount of milk would be much diminished by milking only once a day, and the cow would dry up much sooner. Frequent milking, in imitation of the frequent draughts made by the calf, tends to an increased flow of milk.

Black Leg in Calves.—D. L. Smith. This is said to result sometimes from sudden change in the quality of the food. Overfed young animals, and those in very low condition are most frequently attacked. Dr. Dadd recommends the following treatment. Mix 4 drachms spirits Hartshorn, and one quart of tar water, to this add 1 oz. Tincture of Bloodroot, and give as a drench. Four hours after, give a mixture of Liquid tar 1 oz. Glycerine, 4 oz. thin gruel 1 quart. If the animal shows lameness in the back or hind quarters, apply oil of Cedar 2 oz., Cod Liver oil 6 oz., Sulphuric Ether 2 oz., Tincture of Capsicum 1 oz. First mix the two oils, then add the Ether, shake them thoroughly, lastly add the Tincture.

How to keep Eggs.—Eugene Snyder, Ulster Co., N. Y. By the following process, eggs have been kept good for a year. Pack fresh new laid eggs, small end downward in a cask. When all the eggs on hand at the time, are packed, cover them with a pickle made by dissolving two quarts of unslacked lime and two quarts of salt in four gallons of water. Make this pickle two or three days before wanted for use and stir it frequently; pour the milky liquid upon the eggs, and set the cask in a cool place where it will not freeze.

Singular Disease of Swine.—J. N. Watson, New York Co., informs us that a short time since, he purchased a Suffolk Boar, and noticed at the time a very red spot about the size of a man's hand upon the rump of the animal, but thought nothing of it. The redness soon extended until it covered the whole back and sides, and the animal died in two days. This would seem to be a form of erysipelas, but Mr. W. states that no other symptoms of that disease were present. He opened the animal after death, and found the internal organs apparently healthy. Can any one who has had swine similarly affected, throw light upon the subject?

Artificial Comb for Bees.—A gentleman just in from California, informs us that in San Francisco there is just now no little interest taken in a process of casting the bottoms of the cells of honey-comb from old wax. He says the bees will go on and complete the cells, and that this process not only furthers their work, but secures regularly formed combs in any position in the hive desired. How is this?

Specimens of Insects Named.—Emory Stanford, Vermillion(?) The insects about which you inquire, are probably a species of Coccinella, a description of which by Mrs. Taylor, will be found on page 140.

Green-House Plants.—F. O. Low, Penobscot Co., Me. "Buist's Flower Garden Directory," ($1.25,) is a very good work upon the treatment of plants in houses.

Pure Ground Spices.—Spices ready ground are a great convenience in the cooking department, but in this wicked and *adulterated* generation, as Mrs. Partington calls it, we can seldom know what sort of compounds are contained in the packages labeled Cinnamon, Ginger, Cloves, etc. Messrs. E. R. Durkee & Co., recently favored us with a lot of nice parcels of various spices which prove to be very good. If they will supply such spices to all their customers, they will deserve unlimited patronage.

Church for Deaf Mutes—A Worthy Charity.—The church for deaf mutes in Eighteenth Street, New-York, the only one of the kind in the United States, are making an appeal to the charitable for subscriptions of one dollar each, to relieve their institution from debt. We commend the object as a worthy one. Those who contribute are literally furnishing ears to the deaf, with which they may hear "glad tidings." Rev. Thomas Gallaudet is Rector, and will receive donations.

To Buy Mount Vernon—New York State Contributions.—We have received from Miss Mary M. Hamilton, Vice-Regent, per E. T. Montgomery, Sec., a detailed statement of the contributions to the fund raised in New-York State for the purchase of Mount Vernon, the homestead of Washington, which enterprize has been accomplished, the whole $200,000 having been raised. From this statement it appears that the country contributions amount to $34,886, 28. This, with $3,981,93 raised by Military Companies, Fire Departments, Schools, etc., makes the total amount raised in this State $38,868,21, or more than one-sixth of the entire sum.

New York State Agricultural Society.

The Annual Meeting of this Society was held at Albany, Feb. 8th and 9th. The Treasurer's report showed a prosperous financial condition, the receipts for the past year having been $24,410, and the expenses $18,724, leaving cash on hand, $5,686, to be diminished a little yet, by some unadjusted bills. The following officers were chosen for the present year. *President*—Hon. Benj. F. Huntington, of Oneida County. *Vice Presidents*—1st District, John Jay, of Westchester Co.; 2nd, Chas. S. Wainwright, of Dutchess Co.; 3d, Herman Wendall, of Albany; 4th, Calvin T. Hubburd, of St. Lawrence Co.; 5th, John Butterfield, of Oneida Co.; 6th, Francis M. Rotch, of Otsego Co.; 7th, Jas. O. Shelden, of Ontario Co.; 8th, T. C. Peters, of Genesee Co.;—*Cor. Secretary*—B. P. Johnson, of Albany. *Rec. Secretary*—Erastus Corning, of Albany. *Executive Committee*—Hon. A. B. Dickinson, of Steuben Co.; L. Chandler Ball, of Rensselaer: Chas. P. Wood, of Cayuga; Ezra Cornell of Tompkins; Samuel T. Thorne, of Dutchess.

Elmira was chosen as the place of the next Annual Exhibition. Major Patrick, Pres. of the N. Y. State Ag. College, presented the claims of that institution, stating that it would probably be open for pupils about April. I. About $81,000 have been expended upon the institution, and some $20,000 more are required, which it is hoped the farmers of the State will soon make up.

Advertising Information Gratis.

We have not given our regular chapter under this head, in the present number, partly for want of room at this season, when the Calendar of Operations is most important, and partly because we think that at least all who read our last volume must, by this time, be pretty well initiated into the mode of operating adopted by a certain class of swindlers. A large number of circulars, etc., sent to us by our readers, in various parts of the country, indicate pretty clearly that they are alive to the necessity of turning a deaf ear to these "taking" circulars and advertisements. A chapter now and then, as new swindlers come up, or the old ones appear under a new garb, will probably be all that will be needed.

It may be well to say here, to those who have but recently subscribed to this journal, that as a rule, whenever you receive any of the advertisements and circulars now flooding the country, which offer some splendid chance to make a great deal of money for a small investment, or a sure cure for some disease, for a postage stamp or two, you may put it down that there is a 'cat in the meal tub.' The more specious the statements and promises, the more splendid the chance to make money, or secure profitable situations, the more likelihood there is that the thing is a humbug, though you may not be able to see how it can be. During a year past we have investigated many hundreds of very plausible and taking advertisements and circulars, and in almost every case with the same result. Of the hundreds of "dollars," "quarters," and "stamps for return postage" invested by us in these splendid "chances to make money," we have not received returns enough to amount to $5, all told.

The time and money expended in this enterprise we consider well laid out, for we have abundant evidence that hundreds of thousands of dollars have been saved to the pockets of our readers.

P. S.—A New Humbug to be avoided.—We have recently received from various parts of the country, sundry circulars, announcing a "magnificent scheme," offering 100,000 articles worth $3 to $100 each. You are promised *at least* a $3 article for each $1, with a chance for one worth $100; "and you need not send your dollar, until you know just which article you are to draw." *But* you must send 25 cents first, for a chance to draw, or, as the circular says, to pay expenses of certificate, postage, etc. To the unwary, this appears very plausible, yet we at first thought it so transparent a humbug, as not to need special notice.

But just as we go to press, we learn that some rascally postmasters, interested in the affair as paid agents, have had the impudence to intercept some of our own circulars, and inclose in them the printed announcement of this Philadelphia swindle—thus making it appear, that *we* endorse the thing. This very hour a subscriber from Westchester Co., N. Y., brings us one of these hand-bills, which had every appearance of having come directly from the *Agriculturist* office. As we learn that a number of postmasters are selling tickets for the scheme referred to, we here give notice that we shall show up every one of them detected in using our circulars. For special reasons we now withhold the name of one of them already detected, though we shall report him at once to Washington.

☞ And we here forewarn our readers, that any circular or other matter, appearing to come from our office, which in any way relates to any other business than that of the *Agriculturist* itself, is a bogus affair. We furnish no names to any one, and have only *one* kind of business, viz, that of publishing the *Agriculturist*. We ask every one receiving anything of the kind, to make it known to us promptly, with full particulars.

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

REMARKS.—*The premiums below, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary*. Price $6.50. It weighs 8¼ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines*, with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse-Hoes*, price $8; *or* one of the best *Straw and Hay Cutters*, price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-both Cultivators*. Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers*. Price $6 50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow*. Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from C. M. Saxton & Co's Catalogue, to the amount of 10 cents for every subscriber sent in at 80 cents each.

Business Notices.

☞ *Sixty Cents a Line of Space.*

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Eight sizes, adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

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SANFORD, TRUSLOW & CO., Manufacturers,

239 Water-street, New-York.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Wednesday Evening, April 18, 1860.

The market was quiet for all kinds of Breadstuffs, until about ten days ago, when an active inquiry arose, especially for Flour and Wheat, for which prices have advanced under the recent favorable news from England. The demand has been good, not only for home use, but for shipment, and on speculation. The receipts have not been equal to the average daily sales, and the stocks in first hands have been much reduced. Higher prices have obtained latterly, and desirable lots have been held with much firmness. The bulk of the transactions in Wheat have been in Milwaukee Club wheat, and Chicago Spring wheat, the supplies of which have been large. The rise in freights has tended to check export movements, and and just now there is less activity, and less buoyancy in the market. Yet, the leading receivers are not disposed to press sales, as they look for an improvement, which will enable them to dispose of their stocks more advantageously later in the Spring. The prospect of an export business is more encouraging, and this circumstance tends to increase the confidence of holders. The resumption of inland navigation has not added much to the current arrivals....Corn has been freely offered and purchased, but at reduced prices, the market closing heavily....Rye and Barley have been in moderate demand. The supply of each is fair, for the season....Oats have attracted more attention and have advanced ...The movements in Cotton and Provisions have been limited, and the changes in prices have not been very important. ....Hay has been in good request, and it closes higher, with less offering....Hops have been in lively demand, but at lower rates....Rice, Seeds, and Tobacco, have been less active....Wool has been dull and heavy, with a downward tendency....Feathers, Hemp, and Tallow have been quiet....The transactions in most other kinds of Produce have been limited.

CURRENT WHOLESALE PRICES.

	March. 17.	April. 18.
FLOUR—Superf to Extra State	$5 25 @ 5 60	$5 30 @ 5 55
Superfine Western	5 25 @ 5 40	5 30 @ 5 35
Extra Western	5 45 @ 7 50	5 45 @ 7 75
Fancy to Extra Genesee	5 70 @ 7 50	5 60 @ 7 50
Super. to Extra Southern	6 10 @ 7 50	6 20 @ 7 60
RYE FLOUR—Fine and Super.	3 60 @ 4 40	3 50 @ 4 25
CORN MEAL	3 55 @ 4 15	3 55 @ 4 65
WHEAT—Canada White	1 50 @ 1 65	1 60 @ 1 65
Western White	1 50 @ 1 70	1 50 @ 1 70
Southern White	1 55 @ 1 70	1 55 @ 1 72½
All kinds of Red	1 22½ @ 1 50	1 21 @ 1 50
CORN—Yellow	76 @ 79	75 @ 76
White	75 @ 79	76 @ 79½
Mixed	77 @ 78	72½ @ 74
OATS—Western	43 @ 43½	44 @ 45
State	43½ @ 44½	45 @ 45½
Southern	38 @ 40	39 @ 42½
RYE	85 @ 87	83 @ 84½
BARLEY	75 @ 88	70 @ 85
White Beans	90 @ 1 12½	85 @ 1 10
HAY, in bales, per 100 lbs	87½ @ 1 12½	90 @ 1 10
COTTON—Middlings, per lb	11½ @ 11¾	11½ @ 11¾
RICE, per 100 lbs	3 50 @ 4 25	3 50 @ 4 37½
HOPS, crop of 1859 per lb	6 @ 15	5 @ 15
PORK—Old Mess, per bbl	17 25 @17 35	17 37 @
Prime, old, per bbl	12 50 @	12 75 @13 00
BEEF—Repacked Mess	9 25 @10 50	9 00 @10 50
Country mess	5 25 @ 5 50	5 00 @ 6 00
HOGS, Dressed corn, per lb	8¼ @ 8½	
Lard, in bbls per lb	10¾ @ 11¾	10¾ @ 11
BUTTER—Western, per lb	11 @ 15	10 @ 15
State, per lb	14 @ 21	11 @ 22
CHEESE, per lb	10 @ 13	9½ @ 13
EGGS—Fresh, per dozen	19 @ 20	13½ @ 14
POULTRY—Fowls, per lb	10 @ 12	14 @ 15
Geese, per lb	8 @ 10	10 @ 12
Ducks, per lb	18 @ 20	18 @ 20
Turkeys, per lb	15 @ 18	15 @ 17
Wild Pigeons, per doz	50 @ 75	1 00 @ 1 25
Partridges, per pair	50 @ 75	75 @ 87
FEATHERS, Live Geese per lb	42½ @ 50	44 @ 50
SEED—Clover, per lb	7¾ @ 8	7¾ @ 8
Timothy, per bushel	3 00 @ 3 62½	3 25 @ 3 75
SUGAR, Brown per lb	6 @ 5¾	5¾ @ 8¾
MOLASSES, New-Orleans, prgl	44 @ 49	45 @ 50
COFFEE, Rio, per lb	12 @ 14¾	12¾ @ 14¾
TOBACCO—Kentucky, &c. per lb	4 @ 12½	4 @ 12½
Seed Leaf per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, per lb	34 @ 38	34 @ 38
Domestic, pulled, per lb	28 @ 48	28 @ 48
HEMP—Undr'd Amer'n pr ton	120 @150	120 @150
Dressed American, per ton	160 @200	160 @200
TALLOW, per lb	10⅜ @ 10¾	10¾ @ 10⅜
OIL CAKE, per ton	33 00 @36 50	35 00 @37 00
APPLES—Dried, Per lb	5 @ 7	4½ @ 6
Dried Peaches—pr lb. South'n	10 @ 16	6 @ 14
Dried Raspberries, per lb	18 @ 20	18 @
POTATOES—Mercers, p. bbl	1 75 @ 2 12	1 50 @ 1 75
Peach Blows, per bbl	1 25 @ 1 75	1 25 @ 1 50
Nova Scotia, per bushel	55 @ 60	45 @ 50
CABBAGES, per 100	3 00 @ 5 00	2 50 @ 6 00
ONIONS, Red, per bbl	2 25 @	1 50 @
White and Yellow, per bush	2 00 @ 3 25	1 50 @ 2 50
TURNIPS, Rutabaga, per bbl	1 12 @	1 00 @ 1 25
APPLES, Winter, per bbl	2 75 @ 4 00	3 00 @ 5 00
STRAWBERRIES, South'n, p. qt		75 @ 87
ASPARAGUS, do., p. bunch		37 @ 75

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
27 bus. ds. *this* mon.	150,672	7,459	230,395	9,582	26,169	124,342
25 bus. days *last* mon	67,819	4,242	195,813	6,915	39,965	62,933
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	
27 business days *this* mon.,	260,580	488,250	727,000	69,000	167,000	
25 business days *last* mon.,	295,040	325,950	445,100	44,150	214,500	

Breadstuffs exported from N. Y., from Jan. 1 to April 11.

	1859.	1860.
Wheat Flour, bbls	154,371	176,208
Rye Flour, bbls	2,189	2,403
Corn Meal, bbls	29,402	24,670
Wheat, bush	17,340	143,026
Corn, bush	57,314	156,157

The following is a statement of the exports of the principal kinds of Breadstuffs from the Atlantic ports of the United States since Sept. 1, 1859:

To Great Britain and Ireland.

From	To Date.	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	April 5, 1860	193,279	454,639	64,030
New-Orleans	April 1, 1860	12	——	5,025
Philadelphia	April 1, 1860	8,072	75,777	6,481
Baltimore	April 1, 1860	——	——	——
Boston	Mar. 16, 1860	733	——	——
Other Ports	Mar. 23, 1860	30	7,247	——
Total from Sept. 1, 1859		202,126	537,663	75,536
To about same period, 1858		85,758	415,800	319,450
To about same period, 1857		749,964	3,387,826	2,206,486
To about same period, 1856		769,802	6,870,904	4,016,846

To the Continent.

From	To Date	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	Mar. 27, 1860	27,678	——	11,965
Other Ports	Latest dates	5,179	——	2,072

The following is a statement of the Receipts, and of the foreign Exports of Cotton since 1st September last, and of the Stock now on hand, compared with the five preceding years:

	Receipts	Exports Since Sep. 1.	Stock At present.
1859–60	4,077,000	2,859,000	893,000
1858–9	3,370,000	2,049,000	772,000
1857–8	2,518,000	1,539,000	760,000
1856–7	2,978,000	1,701,000	490,000
1855–6	2,998,000	2,031,000	619,000
1854–5	2,081,000	1,471,000	340,000

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been moderately supplied during the past five weeks, but amply sufficient for the wants of consumers during the season of Lent. Receipts 18,698 bullocks; an average of 3,739 per week. This is 724 above the corresponding month last year. Prices still remain depressed, varying but little from the quotations of the last report. The present rates this week, April 18th were for Prime 9¼c.@10c.; Medium 8c.@8¾c.; Poor 6c.@7¼c. The general average of all sold this week 8c. per lb. estimated dressed weight.

VEAL CALVES have continued to come in plentifully, though not equal to last year. Receipts for five weeks just ended 4,716, an average of 943 per week. Receipts for the corresponding month last year 4,186, averaging 1,046 per week. Prices have declined to 4c.@6c. per lb. live weight.

SHEEP AND LAMBS have been rather scarce, the number received being 23,227 against 22,680 received during the previous four weeks. Prices stood at last market 6 to 7c. per lb. live weight, for good quality with the wool on. A few extras brought 7¼c.

HOGS.—Receipts have increased in supply somewhat over previous month. The number amounting to 22,279. Prices have varied but slightly, standing at 6¼c. to 6¾c. live weight for Corn hogs, and 6c.@6¼c. for distillery fed. The demand is not very large.

The Weather since our last report, (March 18) has been variable—but upon the whole quite favorable for out-door business. Vegetation is several days in advance of last season. The Winter grain looks well, and, in most localities fruit prospects are good. OUR DAILY NOTES condensed, read thus: *March* 18, cloudy A. M. clear P. M.—19, 20, cloudy, getting quite dry—21, cool, cloudy, with raw winds and clouds of dust—22, cloudy A. M., light N. E. snow storm P. M.—23, clear and moderate, two inches of snow on ground A. M. but melted during the day—24, windy, snow squalls—25, 26, 27, 28, 29, clear and fine mild weather—30, 31, clear and hot, dry ——*April* 1, warm, cloudy day with rain at night—2, 3, clear and cool with frost—4, cloudy, with fall of needed rain P. M. and at night—5, 6, clear, fine and warm—7, cloudy, light rain at night—8, cloudy—9, 10, 11, cloudy, raining moderately most of the time; ground sufficiently wet—12, clear and fine—13, showery—14, cold showers, and flakes of snow—snow at the north and northwest—15, clear and quite cold, mercury 31°, ground frozen—16, cool, with rain P. M.—17, cloudy, city plum trees in bloom in sheltered situations—18, clear and mild.

Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *s* indicates snow; *r* rain.]

JANUARY, 1860.

1	8°	8	36	15	34	22	35	29	22			
2	7	9	33	16	34	23	37	30	36			
3	12	10	36	17	34	24	32	31	41*s*			
4	24*s*	11	35	18	29	25	46					
5	12	12	32*s*	19	32	26	34*s*					
6	12	13	28	20	30	27	23	Aver'e.	29			
7	29*r*	14	26*r*	21	38	28	24					

FEBRUARY.

1	10*s*	7	40	13	30*r*	19	19	25	28*s*			
2	5	8	30	14	41	20	18	26	28			
3	8	9	29	15	26	21	30	27	33			
4	23*s*	10	22	16	28*s*	22	35*r*	28	41			
5	22	11	16*s*	17	12	23	40	29	36			
6	42*r*	12	23	18	16*s*	24	41	Aver'e.	27			

MARCH.

1	47*r*	8	38*r*	15	33	22	28*s*	29	36			
2	50	9	34*s*	16	32	23	26	30	42			
3	39*r*	10	31	17	36	24	36	31	48			
4	46	11	31	18	36	25	32					
5	34	12	37*r*	19	41	26	33		1138			
6	44	13	34	20	41	27	30	Aver'e.	37			
7	38*r*	14	34	21	37	28	34					

APRIL.

1	53*r*	5	49*r*	8	43*r*	11	43*r*	14	45*r*			
2	33	6	45	9	50*r*	12	42	15	31			
3	30	7	38	10	45*r*	13	46*s*	16	36			
4	47*r*											

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—o—

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CHINESE POTATOES.

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15 John-st., New-York.

European Potatoes.

I received, two years since, from the seedsman to the Imperial Agricultural Society of France, a collection of ONE HUNDRED VARIETIES OF POTATOES, selected as the best from upward of Five Hundred varieties, collected from all parts of the world, and cultivated by that society for the purpose of testing their quality. This collection has been carefully cultivated during the past two seasons, and specimens exhibited at some of our State and County Fairs, which have attracted much attention. From these *Seventy-five varieties* have been selected, which for their productiveness, fine flavor, and freedom from disease, can be recommended as every way desirable for general cultivation.

For the purpose of introducing as extensively as possible, I have put them up in collections as follows, which can be sent by express to any part of the country:

75	varieties 3 potatoes each, each sort distinctly labeled,	$5 00
50	" 10 " " " "	4 00
25	" 20 " " " "	3 00

Also Davis Seedlings and Dovers at $1 per bushel, $2.75 per barrel. Cash must accompany the order.

B. K. BLISS, Springfield, Mass.

Genuine Prince Albert Potatoes, Price $1

per bushel for cash. Barrels, 25c. extra. Now ready and delivered at the Hudson R. R. R. station at Tivoli. Direct for orders to T. S. CLARKSON, Tivoli, Dutchess Co., N. Y.

EVERGREEN TREE AND SHRUB SEEDS.

Norway Spruce	Per lb	..	75
Balsam Fir	do.	....	3.00
Black Austrian Pine	do.	....	3.00
Cembra Pine	do.	....	2.00
Stone Pine	do.	....	1.50
Weymouth Pine	do.	....	3.00
Pitch Pine	do.	....	3.00
Scotch Fir	do.	....	1.50
Chinese Arbor Vitæ	do.	....	3.00
American Bald Cypress (beautiful), per qt			30
Strawberry Tree (*Arbutus Unedo*) per oz			25
Buckthorn Seed, per lb			1.00
Osage Orange, per qt			75
Honey Locust for Hedges, per lb			75
Yellow Locust for Timber, per lb			75
Virgilia Lutea, (very rare) per packet			25

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J. M. THORBURN & CO.,
15 John-st., New-York.

TO WHOLESALE DEALERS IN GARDEN, FIELD, and GRASS SEEDS.—

I have taken the greatest care in raising and selecting a large and pure stock of every variety of Seeds required by the Gardener, Farmer, and Planter, and purchasers may depend on their being fresh and true to name.

Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labeled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

FRUIT SEEDS—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.

HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.

BOOKS—All works furnished at publisher's prices.

My prices are as low as any others for the same quality of seeds.

Orders by mail will be attended to with exactness and promptitude. R. L. ALLEN, 191 Water-st, New-York.

Long Orange Carrot.

Acknowledged by all cultivators to be the most valuable root crop now in cultivation.

We have a limited supply of seed raised from the finest stock in the world. PRICE PER POUND, $1.00, or at reduced rates in large quantities.

ALSO

Large White Sugar Beet	per lb	....	50c.
Long Red Mangel Wurtzel	do.	....	50c.
Yellow Globe do.	do.	....	50c.
Long Blood Beet	do.	....	75c.
Long Smooth Blood Beet	do.	....	75c.
Premium Flat Dutch Cabbage	do.	....	2 50c.
Extra Fine Large Drumhead Cabbage	do.	....	2 50c.
True White Spined Cucumber	do.	....	75c.
Improved Dwarf Okra	do.	....	75c.
Large Red and Yellow Onion each	do.	....	1 00
Large White Onion	do.	....	1 50

Turnips, Long White French, and 20 other sorts, each pr. lb. 75c.
Dioscorea Batatas (Tubers) or Chinese Potatoes, 25c. per doz.
$1.50 per 100; $10 per 1000.
☞ Send for our Catalogues.

J. M. THORBURN & CO.,
15 John-st., New-York.

NEW VALUABLE SQUASH SEED.

BY MAIL, POST-PAID.

White Leghorn	Per Packet	...	25cts.
Mammoth Cuba	do.	....	25cts.
Mammoth Chili	do.	....	25cts.
Imported Lima Marrow	do.	....	25cts.
Sandwich Island	do.	....	25cts.
True Hubbard, per lb. $1.50,	Per oz.	....	20cts.
True Seven Year Pumpkin	Per Packet	....	25cts.
Japan Apple Pie Melon	do.	....	25cts.

☞ Send for our Catalogues.

J. M. THORBURN & CO.,
15 John-st., New-York.

Hubbard Squash Seed.

1000 lbs. of Hubbard Squash Seed for sale, very cheap, by the original introducer. My seed are of the purest quality, and my prices at the lowest rates. Circulars and placards supplied by the quantity, gratis. JAMES J. H. GREGORY,
Marblehead, Mass.

JOSEPH E. MACOMBER, Wholesale

Vegetable Seed raiser. Portsmouth, R. I.

Excelsior Agricultural Works,
Albany, N. Y.
CHARLES E. PEASE, Proprietor.

(Successor to RICHARD H. PEASE.)

Farmers and Dealers in Agricultural Machines will find it to their interest to patronize this establishment, where they can be supplied with the very best

ENDLESS CHAIN HORSE POWERS, for one or two horses; Lever or Sweep Horse Powers; Improved Threshers and Separators and Cleaners; Circular Saw Mills for cord wood; Cross Cut Saw Mills for cross cutting lumber; Krauser's Patent and Philo's Cider Mills; Corn Shellers; Clover Hullers; Dog Powers for churning, &c., &c.; Wilson's Patent Telegraph Fodder Cutters, &c., &c.

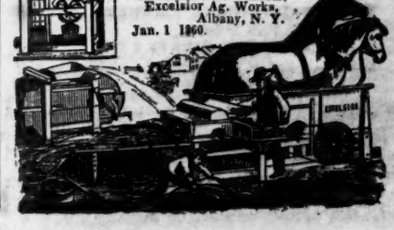
Manufacturing none but the most approved Implements that have been thoroughly and practically tested, I am enabled to give a most liberal warranty on all my implements, knowing that they can not but work as represented.

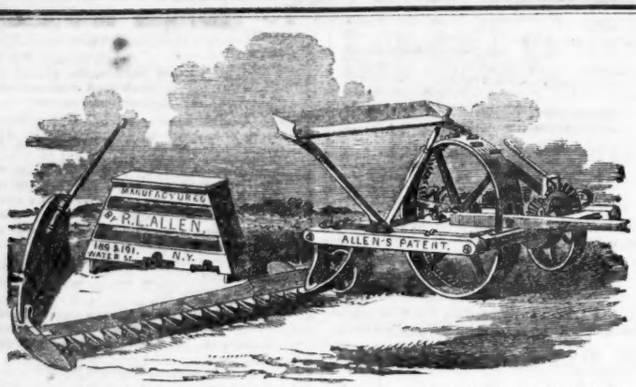
I have just received the first premium at the NEW-YORK STATE FAIR, held here October 4th to 7th, for the best, most durable, useful and cheapest

AGRICULTURAL MACHINES

on exhibition. Orders will receive prompt attention, and Circulars sent gratis on application. Address

CHARLES E. PEASE,
Excelsior Ag. Works,
Albany, N. Y.
Jan. 1 1860.





ALLEN'S MOWING MACHINE.

This Machine has been for several years the leading Mower of the country. It has been oftener victorious in honest trials among intelligent farmers in the United States, than any other Mowing Machine. It has also become the leading Mower in

GREAT BRITAIN AND FRANCE.

In every contest there it has easily beaten all its competitors. The Emperor Napoleon has ordered four for his private farms, and other eminent Agriculturists in Europe have given it the preference over all others.

It is celebrated for it's light draft, perfection and rapidity of its work, simplicity, great strength and durability. A platform can be attached at the expence of $10, which makes it the best and most economical reaper in use.

Price $110, with full setts of extras, tools, &c.

Discount to Dealers. For sale by

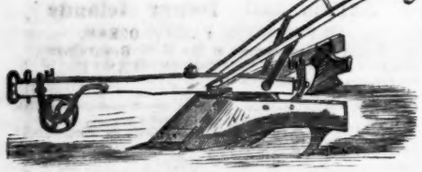
R. L. ALLEN, 191 Water-st., New-York.

AMALGAM BELLS.—Only one-third as much as Brass Composition, with tone and strength equal. Farm, School-houses, Shops and Hotels supplied, 50 to 200 lb. Bells at $6 to $25 each. Churches, Academies, Fire Alarm Bells, 1700 lbs. $175; 825 lbs $100; 650 lbs. $75; 460 lbs $55; 300 lbs. $35; complete and warranted 12 months, with Yoke, Standard, Wheel and Tolling Clapper, and delivered at express offices, railroads, or steam boats.

M. C CHADWICK & CO., 17 Spruce-st., New York.

Sugar Evaporator.

Cook's Patent for converting Sorghum, Cane, and Maple juice into finely granulated sugar in 30 to 60 minutes. This is the only successful Sorghum evaporator yet invented, and it possesses decided advantages over other evaporating pans for either maple or cane juice. For sale at the Agricultural Warehouse of R. L. ALLEN, 191 Water-st, New-York.



Share's Patent Horse Hoe
AND
Hilling Machine.

A valuable, labor-saving Machine.
PRICE $10.

For circular with directions for using, address owners of Patent Right. TREDWELL & PELL, 45 Fulton-st., N Y.

SHARE'S PATENT COULTER HARROW.
SHARE'S PATENT PLANTER AND HOER.
SHARE'S PATENT HOER
For sale by R. L ALLEN 191 Water-st., N. Y.

PRUNING SHEARS.—The best article for Pruning Vines Rose and Gooseberry Bushes, and in fact all kinds of Pruning—will cut a limb, ¾ inch in diameter, with clean cut. Made and sold at wholesale and retail by JOHN ROWE, 269 Pearl-st, New-York.

RUSSIA OR BASS MATS. SELECTED expressly for budding and tying. GUNNY BAGS, TWINES, HAY ROPES &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer, 248 Front Street, New York.

New Onion Hoe.

This implement has been tested by extensive onion growers, who recommend it highly. It is of simple construction, easily worked, and enables one man to do the work of four with the common hoe. It can be used in the cultivation of other vegetables. For full particulars address JOHN GUYER. Westport, Conn.

Metropolitan Washing Machine.

Can be worked by a child—will save its cost by the wear and tear of clothes in a short time. After using three times you would not part with it for three times its cost.

For sale by R. L. ALLEN, 191 Water-st., New-York.

HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price—*Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs. No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press $150. Any sizes and for any purpose of packing made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

WETHERSFIELD SEED SOWER.—Described in March number of Agriculturist. Price $6. For sale by R. L. ALLEN, 191 Water-st., New-York.

Attention, Farmers!

From the unparalleled success of the Ketchum Machine the past season, I am induced to build for the harvest of 1860 a LARGER NUMBER THAN USUAL, and I offer them as the most perfect Machine I have ever manufactured, and at prices to correspond with the times.

HOWARD'S NEW TWO HORSE MOWER—all Iron, light draft, no side draft, no driving fast to have them work well, no clogging. Price only $100

HOWARD'S NEW ONE-HORSE MOWER, is of light draft for one horse and capable of cutting six to eight acres of any kind of grass per day. Price $75.

Wood Frame Mowers, Two-Horse, Price $80.

Combined Mower and Reaper (Iron, with late improvements), took first premium at the United States Fair at Chicago last Fall, price $130.

All the above Machines have Emery's adjustable Lever and Roller, and various other improvements, and are warranted.

Send for Pamphlets. Address

R. L. HOWARD, Buffalo, N. Y.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, the latest improved.
FIELD and GARDEN SEEDS, from the most reliable growers, warranted pure.
No. 1 PERUVIAN GUANO.
SUPERPHOSPHATE OF LIME.
BLOOD AND WOOL MANURE,
BONE DUST, LAND PLASTER,
POUDRETTE. &c.

Sold by GRIFFING, BROTHER & CO.,
60 Cortlandt-st., New York.

NEW-YORK AGRICULTURAL IMPLEMENT, Machine, and Seed Warehouse.

R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequaled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burr Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Stalk Cutters, Presses, Pumps, Brick Machines, Carts and Wagons, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

BURNELL'S PATENT ROTARY LIFT AND FORCE PUMP.

Adapted to DEEP WELLS, CISTERNS, HOUSE and FARM purposes, GREEN-HOUSES, etc. Its peculiar arrangement avoids the necessity of using Leather or India-rubber Valves, Packing, Springs, and other delicate parts, liable to become disarranged, or to require adjustment or renewal, hence it is the most desirable, and in the end the cheapest Pump for all Domestic and Farm purposes, yet produced.

Principal Sales Depot at 23 Platt-st., New-York.

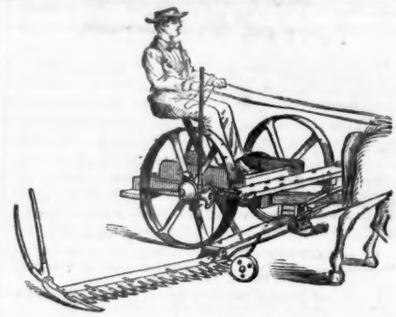
SAM'L. B. LEACH.

THE EXCELSIOR NON-SWARMING BEE-HIVE, with Movable Section-Frames and Comb Guide, Pat. Nov. 9, 1859. Just the arrangement long needed. No trouble with watching and hiving swarms, requires less attention, and a far greater amount of honey obtained, than from swarming hives. And by means of the small frames and "comb guide," the honey is obtained in the most convenient and beautiful form for family or market use. If desired, the hive is readily converted into two swarming hives, or the colony may be divided.

I am also manufacturing an improved dividing, or swarming hive, with either the small frame arrangement, or with glass honey boxes, as purchasers may prefer. This is a convenient, simple, and practical hive.

N. B. The small frame arrangement can be used on any hive the common honey box is used. Taking these improvements together, they are believed to be the most practical and perfect of any yet devised. Hives and Rights for sale at moderate prices. Circulars sent to all who forward a one-cent stamp. Address

E. W. PHELPS, Patentee, Elizabeth, N. J.



AS IT APPEARS IN THE FIELD.

Buckeye Premium Mower,
WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD,

together with several important improvements added the present season.

The Machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left. The Cutter Bar is attached to the frame by a double Hinge Joint, which allows either end to rise or fall independent of the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the Machine.

When not in use, the cutters can be instantly folded over the front of the frame, rendering the Machine as portable as a common cart.

The DOUBLE JOINTED FLEXIBLE BAR belongs exclusively to the Buckeye Mower, and is secured by the patents of SYLLA & ADAMS, and AULTMAN & MILLER, which patents will be fully sustained against all infringements.

One of the strongest proofs of the success of the principles of the Buckeye is to be found in the fact that, since its introduction, numerous other machine manufacturers have changed the construction of their own Machines, and introduced features in IMITATION of the BUCKEYE.

Orders must be sent early to secure Machines. My unfilled orders of the last season amounted to several hundred.

JOHN P. ADRIANCE, Manufacturer and Proprietor,
Po'keepsie, N. Y., and Worcester, Mass.,
Warehouse, 165 Greenwich-st., New-York.

ALLEN'S REAPING & MOWING MACHINE.

NO REEL REQUIRED, as it will work perfectly without, thus saving the additional cost.

This is the LIGHTEST DRAFT.

The most SIMPLE IN CONSTRUCTION.

The LEAST LIABLE TO GET OUT OF ORDER.

The MOST ECONOMICAL machine ever made, and

WARRANTED TO GIVE ENTIRE SATISFACTION

Price $120 with full setts of extras, tools, &c.

A liberal discount to dealers.

R. L. ALLEN, 191 Water-st., New-York.

Also a COMBINED MOWER AND REAPER with reel—
Iron driving wheel.....$130
With large wooden driving wheel..... 135
Large six feet reaper and four feet driving wheel..... 155

THE DEEP BREAKING UP PLOW.

This Plow turns a furrow TWO FEET DEEP and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil *Three Feet deep*.

It is the *most suitable* Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tilth. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about *one-fourth the expense*—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for Tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

In addition to the foregoing, I keep upwards of ONE HUNDRED AND FIFTY other kinds of Plows.

ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

HORTICULTURAL IMPLEMENTS—The largest and most complete assortment to be found in the United States.

FLOWER, FIELD, AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers,

R. L. ALLEN,
191 Water-st., New-York.

More Testimonials
IN FAVOR OF
PYLE'S SALERATUS.

The following legitimate TESTIMONIALS are brought before the public to show that wherever "JAMES PYLE'S DIETETIC SALERATUS" has a fair trial, it takes preference to all others. It is the most wholesome and economical Saleratus in use. All should be sure that their Grocer does not palm off some *other*, done up in a similar kind of pink paper, on which he can make a large profit. Those imitations are slow poison. The genuine has the name of "*James Pyle*" on each package.
DEPOT NO. 345 WASHINGTON ST., N. Y.

NEW-PHILADELPHIA, O., Oct. 5, 1859.—This is to certify that we have sold James Pyle's Dietetic Saleratus, and have always found that where it is once used, it is universally called for again, and we have no hesitation in recommending it as far superior to anything used or sold, bearing the name of Saleratus.
MORROW BROS.

We have sold Pyle's Dietetic Saleratus for some time, and those who buy it once, will buy no other. SAMM & KUHLE.
Hillsdale, Mich., Dec 5, 1859.

I have sold the above mentioned article for the past year, and can recommend it as the purest and best of anything of the kind in use. J. MEYER.
Jonesville, Dec 6 1859.

Having sold James Pyle's Dietetic Saleratus for the last eighteen months, I can say that it is universally liked by my customers, and I believe the only pure article in the market.
Burr Oak, Dec. 7, 1859. C. K. WARD, Agent.

We have sold James Pyle's Saleratus, and can say that we think it the best article in market. C. B. TAYLOR & SON,
Goshen, Dec. 12, 1859. W. B. TAYLOR.

We have sold James Pyle's Soda Saleratus for the last year, and find it the best article of Saleratus that we ever sold. When we sell it to a customer once, they invariably call for Pyle's Saleratus when they want more.
Jackson, Mich., Dec. 24, 1859. PENNY & VAUGHN.

We, the subscribers, have been and are now selling "James Pyle's Dietetic Saleratus" with much satisfaction to ourselves and customers. All that have tried it pronounce it the best they have ever used. The *actual consumers* are the best judges, and it is on their testimony, that we recommend it to all dealers who may want a reliable article.
HOLLISTER & OLMSTEAD, Hancock, N. Y.
GAYLORD CURTIS, Susquehanna Depot.
WHITNEY & PYNE, " "
THOS. INGETRUM & SON, " "
C. S BENNET, " "
D. & D. M. BAILEY, Lehaysville, Pa.
J. W. WOODBURN & Co., Rome, Pa.

From the Boston (Mass.) Post, Jan. 30, 1860.

Pyle's Saleratus is the best preparation for making bread and pastry digestible that ever was used. Every Housekeeper should have it, that every stomach may know the comfort of it.

From the New-England Farmer, Boston, April 4, 1857.

James Pyle's Dietetic Saleratus is attracting much attention among housekeepers for its qualities in producing light and healthy bread and biscuit. Those who have given it a trial, speak in high terms of its value in making good bread. Our readers will do we l to try it.

SOMETHING NEW.
B. T. BABBITT'S
BEST MEDICINAL SALERATUS.

68 AND 70

Is manufactured from common salt, and is prepared entirely different from other Saleratus. All the deleterious matter extracted in such a manner as to produce Bread, Biscuit, and all kinds of Cake, without containing a particle of Saleratus when the Bread or Cake is baked; thereby producing wholesome results. Every particle of Saleratus is turned to gas and passes through the Bread or Biscuit while baking; consequently nothing remains but common Salt, Water and Flour. You will readily perceive by the taste of this Saleratus, that it is entirely different from other Saleratus.

It is packed in one pound papers, each wrapper branded, "B. T. Babbitt's Best Medicinal Saleratus;" also, picture, twisted loaf of bread, with a glass of effervescing water on the top. When you purchase one paper you should preserve the wrapper, and be particular to get the next exactly like the first—brand as above.

Full directions for making Bread with this Saleratus and Sour Milk or Cream Tartar will accompany each package; also, directions for making all kinds of Pastry; also, for making Soda Water and Seidlitz Powders.

AND **MAKE YOUR OWN SOAP** WITH **B. T. BABBITT'S PURE CONCENTRATED POTASH.**

Warranted double the strength of ordinary Potash; put up in cans—1 lb., 2 lbs., 3 lbs., 6 lbs., and 12 lbs.—with full directions for making Hard and Soft Soap. Consumers will find this the cheapest Potash in market.

Manufactured and for sale by
B. T. BABBITT,
Nos. 64, 66, 68, 70, 72 & 74 Washington-st., N.Y.
and No. 38 India-st., Boston.

KEEP YOUR FEET DRY.
A. BROWER'S PATENT COMPOSITION

makes Boots and Shoes and all leather impervious to water, will keep so; polish as well after as before, and last at least half as long again for using it; which everybody ought to have.

Sold in New-York by:
Claflin, Mellen & Co.; Carr, Howard, Sanger & Co.; Wells & Christie; Ellis Bro. & Co; Wessen & Co.; Wessen, Watter & Co.; Wm. Bryce & Co.; Norton Jewett & Co; Harmor, Hays & Co; S. R. Van Duzer & Co.; Princhot, Bruen & Seabury; Walsh, Coulter & Co.; Chapman, Lyon & Noyes; Bilvin & Mead; Lathrop, Ludington & Co.; C. W. & J. T. Moore & Co.; J. H. Ransom & Co; Benedict, Hall & Co.; A. B. Sands & Co; Floyd Clarkman; Gradon McCready & Co.; Harral, Risley & Kitchin; Cook, Dowd, Baker & Co.; Gasherie & Davies; Porogo, Bulkey & Plimpton; Freeland Symes & Co., and by all Boot and Shoe, Hardware, Druggists, Groceries, and Yankee Notion Houses. Send your orders.
A. BROWER & CO., No 4 Reade-st, New-York.

The Empire Dairyman.

Patented Feb. 1859, by REDINGTON & McCLURE, is manufactured by them at Fredonia, N. Y. It has taken the First Premium at all the State and County Fairs where it has been exhibited. It heats the milk uniformly with very little fuel—makes no steam. Supplies hot water in a reservoir attached, and makes the cheese uniform. For further information send for a circular.

DESIGNING AND ENGRAVING ON WOOD.

All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description. THOMAS COX,
105 Nassau-st., corner of Ann-st., New-York.

Important to Housekeepers!
E. R. DURKEE & CO'S
SELECT SPICES.

In this age of adulterated and tasteless Spices, it is with confidence that we introduce to the attention of housekeepers these superior articles. We guarantee them not only

absolutely and perfectly pure,

but ground from fresh Spices, selected and cleaned by us expressly for the purpose, without reference to cost. They are beautifully packed in tinfoil, (lined with paper,) to prevent injury by keeping, and are full weight, while the ordinary ground Spices are almost invariably short. We warrant them, in point of richness and flavor,

beyond all comparison,

as a single trial will instantly prove.
Manufactured only by E. R. DURKEE & CO., New-York.
For sale by dealers in choice groceries generally.

IMPORTANT TO FAMILIES.
MAKE YOUR OWN SOAP.
"SAPONIFIER,"
THE READY FAMILY SOAP MAKER.

Cost of one pound Saponifier (in iron box) .....25c.
4½ pounds of refuse kitchen grease, boiled about four hours, with the Saponifier, which would ordinarily be thrown away, or sold at one cent per pound, say,..... ....20c.
45c.

Forty-five cents, therefore, is the whole cost of fifteen gallons of very superior soft soap, a perfect jelly.

TRY IT!!!

It will clean type to perfection, and where a strong lye is wanted for any purpose, it will be found valuable.

To be had of all respectable druggists and storekeepers.
BEWARE OF COUNTERFEITS.

The Original, Genuine, and Patented Article only made by
THE PENN'A SALT MANUFACTURING COMPANY.
Trade supplied and Circulars sent by addressing
LEWIS, JAMES & CO., Agents,
231 South Front-st., Philadelphia, Pa.

SAPONIFIER,
OR
CONCENTRATED POTASH.

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AN EXCELLENT CHANCE TO OBTAIN CHOICE SEEDS FOR THIS SPRING, WITHOUT EXPENSE.

[During the present month, as well as in past years, the friends of the *Agriculturist*, have greatly favored us in sending in the names of new subscribers, and we return them our hearty thanks. We shall hope for the continuance of these favors. But now that the active labors of the field and garden have commenced, and all are more or less occupied, we propose to make at least some return to those who will at this busy season take a little time and trouble, to talk over the merits of the *Agriculturist* with their friends and neighbors. We therefore offer the seed Premiums below. The seeds are all *pure, fresh*, and of the best kind. **N. B.**—Of course only one of these premiums will be paid on the same name, and it is necessary that every one applying should state which one of the premiums is desired.]

Premium 22.—To any person sending in *new* subscribers at $1 each, for the present volume of the *Agriculturist*, we will present as a premium for each *new* name, 15 parcels of seeds from the list below. If to be sent by mail, we will ourselves pay postage to the amount of *twelve cents*. If packages are chosen on which the postage exceeds 12 cents for the whole, the recipient will need to provide for the excess of postage. *We will give the 15 parcels of seeds and pay 12 cents of the postage for each name.* **N. B.**—If the new names are in clubs, new or old, and *at club prices*, we will give the 15 parcels of seed for each, but can not afford to pay the postage. [The new subscriber can also have the usual 5 parcels of seeds, on furnishing the stamped envelopes.]

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[For descriptive notes, see pages 3 and 4 of January *Agriculturist*.]

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100—Early Purple Cape Broccoli—do. do.
[illegible] do. do.
[illegible] do. do.
[illegible] do. do.
[illegible] do. do.
17—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
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50—Schizanthus.
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80—Yellow Hawkweed.
84—African Marigold.
85—Gaillardia, mixed.
87—Coreopsis.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
118—Bee Larkspur.
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
126—Centranthus.

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